DOCUMENT RESUME

ED 331 611 PS 019 417

AUTHOR Jabre, Bushra
TITLE Education and Primary Health Care. UNESCO-UNICEF Co-operative Programme Digest No. 17.
INSTITUTION United Nations Children's Fund, Paris (France).; United Nations Educational, Scientific, and Cultural Organization, Paris (France). Regional Office for the Middle East and North Africa.
PUB DATE Mar 86
NOTE 129p.; For other titles in this series, see PS 019 414-425.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS *Child Health; Developing Nations; Elementary Education; Foreign Countries; Guidelines; *Health Education; *Health Promotion; International Programs; *Nonformal Education; *Primary Health Care; Teacher Education
IDENTIFIERS Child to Child Program; *Formal Education; UNICEF

ABSTRACT

This digest concentrates on UNICEF's program priorities and summarizes the contents of the first 17 issues of its series on education and primary health care (PHC). Chapter I offers an introduction to PHC. Chapter II describes UNICEF's child health revolution, focusing on the direct and immediate interventions of growth monitoring, oral rehydration therapy, breast-feeding, and expanded immunization. Chapter III takes up the central topic of education for PHC. Chapter IV describes nonformal education for PHC in terms of planning strategies, strategies of implementation, and illustrative and innovative approaches. Subsections concern: (1) an illustrative approach to nonformal education for the purpose of reducing infant mortality; (2) creation and communication of suitable messages; (3) innovative approaches; (4) the process of evolving specific programs of action; and (5) the use of the mass media in nonformal education. Chapter V focuses on formal education for PHC, offering suggestions for the promotion and organization of school health education programs in the context of PHC. An appendix includes lists of topics in health education that are appropriate for presentation in primary schools and teacher training courses. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED331611

Digest No. 17

Education and Primary Health Care

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY UNESCO TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 019 612

unesco-unicef
co-operative programme
paris

Child, Family, Community

DIGESTS

Earlier titles in the Series

Digest No. 1 *Our Future is in Our Children : The Case for Early Childhood Care and Education*, by Veda Prakasha

Digest No. 2 *Battling Costs for Quality and Quantity : Emerging Responses in Early Childhood Care and Education*, by Veda Prakasha

Digest No. 3 *Zero Through Six : Learning and Growing: What we Know of the Very Young Child*, by Veda Prakasha

Digest No. 4 *Towards an Open Learning Environment for the Young Child : Some Principles, Practices and Issues in Curriculum Planning* by Veda Prakasha

Digest No. 5 *Preparing to Help the Young Child Learn and Grow: Training ECCE Personnel*, by Jay Ratnaike

Digest No. 6 *A Facilities Design Guide*, by David J. Vickery

Digest No. 7 *Education of and by the Family : Practical Guidelines for Establishing Family Educational Units*, by Cornelia Quarti

Digest No. 8 *General Principles of Management for Educational Planners and Administrators*, by Ananda W.P. Gurugé

continued on inside back cover

Digest No. 17

Education and Primary Health Care

by Bushra Jabre
Regional Consultant,
Health Education and Women's Activities
UNICEF Regional Office for the
Middle East and North Africa

unesco-unicef
co-operative programme
paris

SAVING 20,000 LIVES A DAY

Recent breakthroughs in both scientific knowledge and social organisation have made possible a 'children's revolution' which could save the lives of half the 40,000 children who now die each day and protect the health of many millions more – the **State of the World's Children** report 1984 (UNICEF)

THE SURVIVAL KIT:

BREAST-FEEDING

The promotion of present day knowledge about breast-feeding and weaning – and about the dangers of bottle feeding in poor communities – could save the lives and protect the health of millions of infants

ORAL REHYDRATION

Dehydration – caused by diarrhoea – is the world's biggest killer of children (5 million deaths a year). The discovery of oral rehydration therapy (ORT) now makes it possible to save most of those lives by a simple and cheap treatment administered by the parents in the child's own home

IMMUNISATION

Extending immunisation programmes with new vaccines – and educating parents about the need for full protection – could prevent the six main immunisable diseases from killing 5 million children a year and disabling 5 million more

GROWTH MONITORING

Growth monitoring using inexpensive modern growth charts can help parents themselves to prevent up to half of the child malnutrition in the developing world

POPULATION

There has never been a steep fall in birth rates which has not been preceded by a steep fall in death rates. One reason is that if parents are more confident that their children will survive infancy they will be willing to consider family planning. So if practical development to improve child survival could help to stabilise world population at an earlier time and at a lower level

PREFACE

"Education and Primary Health Care" has been a theme for a score of issues in the series of **Notes, Comments...(Child, Family, Community)**. Since the Alma Ata Conference, "Health for All by the Year 2000" has developed from a slogan into a basic element of policy of both governments and specialized agencies. UNICEF's concentration on a Child Survival and Development Revolution through a seven-pronged strategy as mnemonically represented by the acronym GOBI-FFF has been particularly significant.

It has been recognized that education and communication constitute the essential infrastructure for CSDR. The Unesco/UNICEF Co-operative Programme has, therefore, given due attention to exploring how education could be mobilized to make its due contribution. Digest No. X Mobilizing Education to Reinforce primary Health Care proved to be particularly successful in that a reprint of 2000 copies had to be ordered within two months of its release and requests for it continue to pour in from various parts of the world.

This Digest by Bushra Jabre - a former Unesco specialist, now a UNICEF staff member, with field service in the Arab States as well as the Pacific - is a further attempt to highlight the role of education in health development. It concentrates on UNICEF's programme priorities and effectively summarizes the contents of the first seventeen issues of **Notes, Comments...New Series** on "Education and Primary Health Care".

The Unit will be pleased to receive comments and suggestions from readers.

Dieter Berstecher
Chief, Unit for Co-operation
with UNICEF and WFP

Paris, March 1986

TABLE OF CONTENTS

Chapter		Page
I	**PRIMARY HEALTH CARE (PHC)**	1
	Introduction	1
	Meaning and Components of PHC	2
II	**UNICEF's CHILD HEALTH REVOLUTION**	7
	GOBI-FFF	7
	The Alliance of Malnutrition and Infection	12
	The Four-fold Strategy of Direct Immediate Intervention: "Technological Breakthroughs"	13
	A. Growth Monitoring	13
	B. Oral Rehydration Therapy	17
	C. Breast-feeding	20
	D. Expanded Immunization	24
	A Three-fold Supportive Strategy: "Social Breakthroughs"	26
	A. Food Supplements	26
	B. Family Spacing	30
	C. Female Education	32
III.	**EDUCATION FOR PRIMARY HEALTH CARE**	37
	Education as Life Long Learning	39
	Minimum Essential Learning Needs	41

Chapter		Page
	The Concept of Education for PHC	44
	The Content of Education for PHC	45
	Strategies and Approaches	46
IV	NON-FORMAL EDUCATION FOR PHC	51
	Planning Strategies	53
	Programme Development Process	55
	Priority Groups and Priority Problems	56
	Strategies of Implementation	57
	A. Understanding the People	57
	B. Ensuring Participation of the People	58
	C. Integration with Related Services and On-Going Activities	60
	An Illustrative Approach in Non-formal Education to Reduce Infant Mortality	62
	Creating and Communicating Suitable Messages	67
	Innovative Approaches	69
	Evolving Specific Programmes of Action	70
	The Use of the Mass Media in Non-formal Education	71
V	FORMAL EDUCATION FOR PHC	79
	Present Situation of Health Education in the Third World	81
	Community Support for School Health Education	85
	CHILD-to-Child Programme	86

Chapter		Page
	The Educational System - Its Potential	92
	Suggestions for the Promotion of School Health Education Programmes in the Context of PHC	95
	A. Co-ordination and Collaboration	95
	B. Human Resource Development	96
	C. Organization of School Health Services and School Health Activities	96
	D. Improvement of the Instructional Component of Health Education	98
	E. Strengthening School/Family/Community Co-operation	104
	Organization of School Health Education Programmes in the Context of PHC	105
	A. Policy and Structure	166
	B. Health Instruction and Teaching	107
	C. Teachers and Other Personnel	110
	D. A Health Environment	111
	E. School Health Services	111
	F. School/Family/Community Relationship	112
APPENDIX	An Example of Lists of Topics in Health Education	113
	I. Topics to be Presented in Primary School	113
	II. Topics for Inclusion in Teacher Training Courses	115

		Page
RFFERENCES	Notes, Comments... (Child, Family, Community) Education and Primary Health Care	119
BIBLIOGRAPHY		121

CHAPTER I

PRIMARY HEALTH CARE
(PHC)

INTRODUCTION

Ours is perhaps the first generation in history which has the knowledge and resources to achieve a great improvement in the health of mankind. Yet everyday more than 40,000 young children die from malnutrition and infection, and for every child who dies, six now live on in hunger and ill-health which will be forever etched upon their lives. It is estimated that 17 million children from birth to age five die every year.

The progress towards preserving the lives of children, which the world has witnessed between the end of the Second World War and the beginning of the 1970s, has slowed down. For many children in the developing countries, the quality of life is actually falling as the economic situation of the parents is worsening.

Continuing poverty is at the root of the world's most pressing problems. The striking fact about mortality today is that despite the massive economic growth and technological progress of the period following the Second World War, the same basic complex of infectious, parasitic, respiratory diseases, compounded by nutritional deficiencies, still account for most of the world's deaths.

Historical realities point out that health improvement in industrialized countries has not been especially related to medical technology and specific disease control activities, but rather to overall improvements in certain aspects of living standards, adequate food, a sanitary environment, safe water, safe disposal of human and other wastes, improved personal conditions including education and basic medical care.

This growing understanding of the bases of good health, coupled with changed ideas about economic and social development, are inherent to the Primary Health Care approach to "Health for All by the Year 2000".

MEANING AND COMPONENTS OF PHC

To be effective, the primary health approach should form the integral part of a country's health care system, of which it should be the cornerstone, and that of the overall social and economic development of the community and the nation. PHC attacks the main health problems facing the community and does so through PROMOTIVE, PREVENTIVE, CURATIVE AND REHABILITATIVE actions as they are needed. Since these actions grow out of real life conditions and the social values of each country, they vary from country to country.

Since under-development and poverty are the major factors causing ill-health, national development can contribute greatly to better health, especially those components that raise the incomes of the poor, such as rural development, agrarian reforms and the promotion of employment

Actions taken to improve health in turn will accelerate economic development by building community self-reliance, overcoming apathy, improving the quality of labour, reducing the burden of ill-health and expanding labour-intensive services. The Primary Health Care approach draws largely on community resources that otherwise would remain untapped.

No single model is applicable everywhere, however, PHC, should include the following:

- *Promotion of proper nutrition;*
- *Adequate supply of safe water;*
- *Basic sanitation;*
- *Maternal and Child Care, including Family Planning;*
- *Immunization against infectious diseases*
- *Appropriate treatment of common diseases and injuries.*
- *Prevention and control of locally endemic diseases;*
- *Education about common health problems and what can be done to prevent and control them.*

PHC seeks to bring about the overall promotion of health by:

1. *Bringing the individual, the family and the community the responsibility for PHC with support from the national health care system.*
2. *The active participation of the community in defining its needs and finding ways to satisfy them.*
3. *Using the community, as well as the national resources.*

4. *Using simpler and less costly technology.*

5. *Mobilizing other sectors, such as education, agriculture, public works, housing, information and communication, and industry.*

PHC recognizes that in order to achieve good health, people must have the basic necessities of life, e.g. enough food to eat and plenty of safe water. It emphasizes the need for a safe environment and for people to understand the role they themselves can play in improving their own health and promoting their socio-economic development.

There is much that an active and self-reliant people can do to improve their health - in fact, health is not a commodity that can be delivered to people. Its attainment requires their enlightened participation, as individuals, families and communities in measures to prevent, control and treat disease.

Individuals and families cannot become real agents of their own development unless they are given the opportunity to identify their true health needs, assess the existing situation and suggest how problems may be solved, using all available resources.

Individuals should accept a higher degree of responsibility for their own health care, recognizing how the health of each person and each family contributes to the development of the community. This includes adopting a healty life-style, ensuring good nutrition and hygiene and a proper use of immunization services. If this goal is to be realized, a major programme for the development of health care services is necessary but not sufficient.

HEALTH IS A FUNCTION OF NOT ONLY MEDICAL CARE, BUT OF THE OVERALL INTEGRATED DEVELOPMENT

OF SOCIETY - CULTURAL, ECONOMIC, EDUCATIONAL, SOCIAL AND POLITICAL.

Health also depends on a number of supportive services - nutrition, improvement in environment and health education.

During the next two decades, therefore, the three programmes of:

1. *integrated overall development, including family planning*
2. *improvement in nutrition environment and health education; and*
3. *the provision of adequate health care services for all, and especially for the poor and under-privileged*

will have to be pursued side by side.

If through education, individuals can acquire the essential information, skills and values necessary to take good care of their own health, the incidence of illness will be considerably reduced and its treatment, when it occurs, will be simpler and more economical.

One important tool would have been the provision of universal primary education in which adequate health education is an integral part.

The component of health education in primary education is meagre and, at present, only 25% of the children complete primary school in most of the poorer countries. Health education, therefore, never reaches the masses of the people, and especially the poor. 6/ Programmes of non-formal and adult education for PHC have to be developed in a big way so that the millions of illiterate young women, men and adults who did not, or could not, go to school can take care of their own health and that of their families.

CHAPTER II

UNICEF's CHILD HEALTH REVOLUTION +/

GOBI-FFF

"The recent advances made in both biological science and social organization make it possible to believe that a revolution in child health could save the lives of up to seven million children each year, could protect the health and growth of many millions more, and could help to slow down the growth of the world population. Last year there was evidence to show that these drastic gains in child well-being can, despite economic recession, be achieved throughout the world at a relatively low cost and in a relatively short time."

The techniques which make such a revolution in child health possible are:

- *Oral Rehydration Therapy (ORT) - a simple and inexpensive method of preventing or correcting dehydration which is induced by diarrhoeal infection and which, with an estimated 5 million young victims a year, is the leading cause of child death in the modern world.*
- *Growth monitoring - the use of simple child growth charts (costing US$0.10 per child) which, along with regular monthly weighing and back-up advice,*

+/ The State of the World's Children 1984, James Grant, UNICEF, pp. 1-5

can help parents to make better use of the food they have and prevent up to half of all the malnutrition in the developing world.

- *Expanded immunization - using newly-improved vaccines to prevent the six main immunizable diseases from killing an estimated 5 million children a year and disabling 5 million more.*

- *The promotion of scientific knowledge concerning the advantages of breast-feeding and how and when an infant should be given supplementary foods.*

The fact that a major improvement in the health and well-being of the world's children can now take place does not automatically mean that it will happen, and the challenge ahead is the challenge of translating local successes which show that a child health revolution is a possibility into intensive national campaigns which will make that revolution a reality.

This challenge is primarily political, rather than technical or financial. The low-cost techniques mentioned above are available to act as a spring-board for this great leap forward for the world's children.

Any government which decides to make a serious commitment to saving the lives and protecting the health and growth of its children can now move towards this goal.

Money is important and more is needed, but a much greater need is the mobilization of existing human resources and organizations

behind this great cause, for a children's revolution cannot be accomplished through exclusively formal channels or by rigidly conventional means.

In most nations, official health services do not reach more than a quarter of the population.

Bringing the benefits of recent breakthroughs to all children will therefore depend on the health professionals lending their expertise to much more far-reaching campaigns involving people, institutions and channels of communication which go far beyond the present scope of the health services themselves.

"MOBILIZING ALL ORGANIZED RESOURCES" is the key to unlocking the present potential for drastic improvements in the health and well-being of children. For the great barrier to be overcome, the lack of awareness about the means now available for saving and nurturing life among parents, communities, opinion-leaders - and even some health professionals - must be emphasized.

Whether or not people and their organizations become involved will decide whether or not the children's revolution will realize its potential - UNICEF believes that a new way forward for children in the 1980s is now available.

PHC is the idea which makes this revolution possible. The spread of education, communication and social organization is the circumstance which makes it practicable. Growth monitoring, oral rehydration therapy, the promotion of breast-feeding and expanded immunization are the techniques which make it affordable even in the midst of a recession.

As a convenient mnemonic, these "cutting edge" techniques are often referred to as GOBI-FFF, which stands for:

- Growth monitoring;
- Oral rehydration therapy;
- Breast-feeding and Immunization, plus the equally vital but more difficult and costly elements of:
  - Family spacing;
  - Food supplements; and
  - Female education.

There are, of course, other priority problems - especially malaria, intestinal parasites, iodine deficiences and upper respiratory infections - and the precise mix of appropriate activities needs to be decided in response to local problems and in consultation with the local communities.

The "GOBI" elements are distinguished by being low-cost and universal in relevance. It is these four actions which make it possible to break the alliance of malnutrition and infection threatening the lives of millions of children annually and retarding the growth of both the body and mind of hundreds of millions of other children. These four actions are PHC action which at low financial and political cost could bring most benefits to the majority of children in most parts of the developing world. Together, they would break the grip of that terrible alliance.

In any community, the best food for an infant is its mother's milk. In any community, the single indicator of a child's normal health growth is its regular gain

in weight. The best treatment for a child at risk of dehydration is the early administration of oral rehydration therapy. The best protection against six of the most dangerous diseases of childhood is complete immunization during the first year of life.

BUT IN THE DEVELOPING COUNTRIES, WHERE SO MANY INDIVIDUALS AND ORGANIZATIONS ARE NOW WAITING TO ADVANCE THE CAUSE OF PHC THESE BREAKTHROUGHS CAN BE DECISIVE:

- BECAUSE ALL FOUR STRATEGIES (GOBI) EMPOWER PARENTS TO DO THE BEST THEY CAN FOR THEIR CHILDREN, THEY PROMOTE CONFIDENCE AND SELF-RELIANCE.
- BECAUSE THEY ARE SIMPLE ACTIONS PRODUCING TANGIBLE RESULTS, THEY CAN GENERATE ENTHUSIASM FOR AND ACCEPTANCE OF, THE WIDER CAUSE OF PHC ITSELF.
- BECAUSE THEY USE APPROPRIATE TECHNOLOGIES, THEY ARE NOW AVAILABLE FOR ALL AND AT A LOW COST.
- BECAUSE THEY ARE INVOLVING RATHER THAN ALIENATING, DEPENDING AS MUCH ON COMMUNITY SUPPORT AS ON PROFESSIONAL EXPERTISE, THEY PROMOTE THE VERY ESSENCE OF THE PHC IDEA.
- BECAUSE THEY ADDRESS THEMSELVES TO THE MAJOR CAUSES OF CHILD ILLNESS AND CHILD DEATH IN ALMOST ALL COMMUNITIES OF THE DEVELOPING COUNTRIES, THEY HAVE THE POTENTIAL TO SPREAD A REVOLUTION IN THE WELL-BEING OF HUNDREDS OF MILLIONS OF SMALL CHILDREN.

THE ALLIANCE OF MALNUTRITION AND INFECTION

The potential contribution of the four GOBI actions towards that child revolution cannot really be appreciated without a full understanding of the main causes of illness and death among the world's children. For although the causes of most of those 15 million child deaths a year - and an equal number of disabilities - are shamefully simple and ordinary, they are clouded in misconceptions which obscure both the problem and its potential solutions.

Perhaps the greatest of these misconceptions is that malnutrition is caused only by the lack of food. Intestinal parasites can cause malnutrition. Changing from breast-feeding to commercial milk can cause malnutrition. Not knowing how and when to begin weaning can cause malnutrition. Ignorance of food values and human needs causes malnutrition and in half or more of all cases malnutrition, is caused by infection.

Malnourished children could die from illnesses such as measles. The infection itself is likely to be the cause of the malnutrition. All infections have a nutritional impact. They can depress the appetite. They can decrease the body's absorption of nutrients. They can induce rejection of food by vomiting. They can drain away nutrients through diarrhoea. They can induce mothers to stop feeding whilst the diarrrhoea lasts (thus assisting both dehydration and malnutrition). Infections become a major cause of malnutrition among the world's children by any or all of these ways.

Both malnutrition and infection are usually joined in a self-reinforcing cycle, it is the frequency of the attacks on the vulnerable body of the growing child which kills so many millions of children every year and impairs the normal mental and physical growth of so many millions more.

For the sake of the physical and mental development of children and for the sake of the social and economic development of societies, the original cycle of malnutrition and infection must be broken. Somehow parents must be empowered, by all possible means, to reduce the frequence and severity of set-backs to the normal healthy growth of their children during the first few years of life.

THE FOUR-FOLD STRATEGY OF DIRECT IMMEDIATE INTERVENTION: "TECHNOLOGICAL BREAKTHROUGHS"

The four strategies which will be discussed below could be the vanguard for PHC.

They reverse the usual relationship between doctor and patient by using knowledge and technology to empower rather than alienate those whom they are designed to serve. Rather than making people passive and dependent recipients of health care, they enable people to become informed activists in the protection of their own and their families' well-being, and by doing so, they promote the cause of self-reliance and people's participation in health.

These four simple, low-cost, universally relevant actions are aimed at the heart of the world's major child health problem - the reinforcing alliance of malnutrition and infection which attacks hundreds of millions of young children during the most vital years of mental and physical growth.

ALTHOUGH INDIVIDUALLY THESE STRATEGIES ARE EFFECTIVE, THEIR COMBINED IMPACT CAN BE CONSIDERABLY GREATER THAN THE SUM OF THEIR INDIVIDUAL CONTRIBUTIONS.

A. Growth Monitoring

Regular monthly weight gain is the most important single indicator of a child's normal healthy growth but neither a mother nor a pediatrician can gauge that monthly growth visually.

The first possible breakthrough against child malnutrition and ill-health is the mass-use of simple CHILD GROWTH CHARTS, +/ kept by the mothers in their own homes, as stimulus and guide to the proper feeding of the pre-school child. Consistent under-nutrition, successive infections and bouts of diarrhoeal diseases can all hold back a child's growth for weeks and months in a way that may pass unnoticed by the mother, but it will not pass unnoticed by the chart.

Regular monthly weighing and the entering of the results by the mother herself can make malnutrition visible to the one person who cares most and can do most about improving the child's diet. There is evidence to suggest that in as many as half of all cases of child malnutrition, it is the invisibility of the problem rather than the lack of food in the family, which is the principal constraint of improving the nutritional status of the child.

This is why the simple act of rendering the problem visible can in itself reduce the incidence and severity of child malnutrition. The accompanying message is simple: WEIGHT GAIN FROM ONE MONTH TO THE NEXT IS GOOD; WEIGHT CONSTANT IS NOT GOOD; WEIGHT LOSS IS A SERIOUS DANGER SIGN. *A child who has just had measles or has suffered from an episode of diarrhoea for example, may well have failed to gain in weight from one monthly weighing to the next. When the mother can see that this has happened, her spontaneous reaction, if there is food available, is*

+/ For an introduction to the Standard Growth Chart, see Chapter IV - See How they Grow; Notes, Comments... (Child, Family, Community) Digest N° X - Mobilizing Education to Reinforce Primary Health Care by David Morley, M.V. Joseph, Ananda W.P. Gurugé, Harmen Tiddens, Karin Edström and Fred Katz.

to give the child more at the family meals or to persist in persuading and helping the child to eat even when the appetite is depressed.

A typical growth chart of a child in the developing world shows that during the first six months of life, breast-feeding keeps the infant growing normally. Thereafter, as weaning begins, and contact with the outside world increases, malnutrition and infection, each making the other worse, begin to drag the child's growth so that the weight gain between the age of six months ar three years is very small.

If the mother of the child had been able to see this problem on the growth chart in her own home, then the child's progress would almost certainly have been better. Apart from being a scientific early warning system, such charts can offer encouragement by making the solutions as visible as the problems. Breast-feeding success, for example, is clearly visible on the chart, and immunization and the availability of oral rehydration therapy would both have made a dramatic difference to a child whose 'life-line' shows approximately 16 weight losses from diarrhoeas and infectious diseases in this first three years (average estimated number).

Often, growth charts have been kept in clinics rather than in homes and the weighing, monitoring and evaluating have been the responsibility of health personnel rather than of mothers. But the revolutionary potential of the growth chart will only be released when this pattern is reversed, and the technology of the charts and the scales is used to involve and enable the mother in the

task of improving her child's nutrition rather than to alienate her from the responsibility by professionalizing the process and wrapping its techniques in mystery.

> In Indonesia today, two and a half million infants in 15,000 villages are regularly being weighed by their mothers at monthly village "rallies" where the women hold their traditional get-togethers. The scales used in the familiar market place "dacin" on which illiterate mothers can measure their children's weight. Those who can read then help the illiterate to plot the result of the weighing on the mother's own growth chart.

Rather than comparing the child's growth curve to that of a 'normal' child which is often unnecessarily worrying to the mother, the growth charts now being used in Indonesia concentrate on the child's own individual growth. The main message conveyed is that A RISING LINE OF MONTHLY DOTS IS GOOD, A LEVEL LINE MEANS MORE FOOD IS NEEDED, AND A FALLING LINE IS A SIGN OF DANGER CALLING OUT FOR MORE FOOD AND PERHAPS MEDICAL ATTENTION.

To become effective as an education tool, the growth charts need to be assimilated into familiar forms of weighing, traditional forms of social organizations and opportunities for participation. In some places, the weighing itself may be the stimulus, around which the means and knowledge of other health improvements, information about oral rehydration salts, vaccination campaigns, discussion of weaning foods and breast-feeding, and provision of iron folate pills for pregnant women and of vitamin A tables for children, might be made available. Other activities might provide a forum for participation.

****
* *
* *The main value of the growth charts is that* *
* *they are practical and powerful educational* *
* *tools for teaching mothers how to protect* *
* *their child's healthy growth. With the chart,* *
* *a mother can see progress or lack of it,* *
* *see the monthly weight gains or setbacks,* *
* *

see the downward falls from diarrhoeal infections and the upward jumps from extra feeding. The result of this visible symbol, this record and reminder, is the more informed involvement of the mother in the struggle for the health and growth of her children.

B. Oral Rehydration Therapy

As the half-way point in the first year of life approaches, one of two evils begins to undermine the normal growth and weight gain of tens of millions of the world's infants. The first is that the mother will not begin to give her baby other foods in addition to breast milk. The second is that she will.

From the age of six months, breast milk alone is no longer sufficient to meet the needs of a growing child. If supplementary feeding is not now introduced, then growth slows down, weight gain falters and resistance falls. Not beginning to add supplementary food at this age pushes the child towards the edge of the vortex of malnutrition and infection.

If, on the other hand, supplementary foods are introduced at the age of 5-6 months then the risk of infection and malnutrition is almost as great. For as a child is weaned from the breast on to other food and drink, so it is weaned into increasing contact with an outside environment which may well include unsafe water, contaminated foodstuffs, unhygienic sanitation and uncontrolled infection.

To keep a child growing normally, there is no question that the introduction of supplementary foods must begin at this time. So help for the mother in weaning her child safely

is the next obvious falcrum against which leverage for improvements in child health and growth must be exerted.

For the majority of infants in most parts of the developing world, the greatest danger of the weaning period is the danger of dehydration induced by diarrhoeal infections.

To protect the child from diarrhoeal infection is a task which no mother can accomplish alone for it involves an armoury of deterrents:

- health and nutrition education;
- more and better weaning mixes;
- more hygienic preparation and storage of food;
- more water and safer sanitation;
- improved domestic and personal hygiene; and
- immunization against diarrhoea-inducing infections like measles.

Action on all these fronts is obviously necessary - and not just for the prevention of diarrhoea. But in the meantime, dehydration continues to claim the lives and stunt the growth of millions of children in almost all communities of the developing countries. Mothers therefore need help now if they are to protect the health and growth of their children through the vulnerable years.

Diarrhoea itself is so common in the developing world - with an estimated 500 million children suffering from the infection 3 or 4 times a year - that most parents regard it as just a normal part of growing up. Normally, the infection cures itself in a matter of days, but in about 10% of all cases something starts to go seriously wrong.

Perhaps, feeding stops: the natural reaction of most mothers when a child has diarrhoea is to withhold food and fluid. Perhaps, the child just wouldn't eat, the appetite being depressed by infection. Or perhaps, the child's powers of recovery are already at a low ebb. Whatever the cause, the infection persists and the fluids continue to drain from the body. In 2-3 days, 15% of the body weight can be lost and death can result in 1 or 2 hours (about 5 million dehydration deaths could be prevented by the use of ORT).

ORAL REHYDRATION THERAPY IS A HOME TREATMENT OF THE WORLD'S LARGEST KILLER OF CHILDREN - DIARRHOEA. IT CAN BE TREATED BY A MOTHER GIVING HER CHILD THE RIGHT MIX OF SUGAR, SALT AND WATER IN HER OWN HOME (8 TEASPOONS OF SUGAR TO ONE OF SALT PER LITRE OF BOILED AND COOLED WATER).

Previously, dehydration could only be treated by qualified medical personnel using expensive intravenous feeding in an often inaccessible hospital. Health systems in developing countries rarely reach more than 25% of the people.

The ORT can be promoted throughout the rural areas by co-operation with the existing bodies in the various communities, rather than limiting the effort to the health systems. To achieve this, every available channel will have to be involved to make the knowledge and the means of ORT available to the 500 million mothers and young children in the poorest areas of the developing world. Radio, mass media, adult education centres, schools, women groups, community development workers, PHC networks and the health services should be all involved and responsible.

With the right ingredients available and the knowledge that drinking - not the withholding of fluid - is the right response to childhood diarrhoea, ORT could become a 'People's medicine' and put into the hands of parents themselves the means to save the lives of most of those 5 million children who die each year from diarrhoeal infections.

A new approach to the community and especially mothers is required. In order to communicate one must start from where the mother is - a marketing strategy has to be developed and must be consistent at all levels of the Information, Education, Communication support system.

Two messages are vital for parents:

- CONTINUE FEEDING EVEN WHEN YOUR CHILD HAS DIARRHOEA.
- BEGIN REPLACING FLUID LOSSES BY ORAL REHYDRATION TREATMENT AS SOON AS THE DIARRHOEA BEGINS.

By this technology and these messages most dehydration deaths can be prevented and growth can be maintained. The challenge is the creation of support for ORT among the health professionals, understanding within the community and confidence among mothers. Once created, a parent's confidence in his or her own ability to bring about improvements in family health will probably not stop at ORT.

C. Breast-Feeding

For infants who are breast-fed, the first six months after birth are often the healthiest time in their lives. More than anything else, this healthy start reflects

the protection which breast-feeding offers to all infants. It is not an exaggeration to say that if breast-feeding were to be gradually replaced by milk powders and feeding bottles in the low-income families of the developing world, then the battle to protect the normal physical and mental growth of the majority of the world's children would be lost.

UNICEF estimates that a comprehensive breast-feeding campaign which succeeds in changing medical attitudes and hospital practices to control the irresponsible promotion and marketing of artificial infant formulas and to help mothers both to improve their own nutrition and to be reassured that breast-feeding is best - such a campaign could save one million infants a year within a decade from now.

Breast milk is the best food for a baby in any society, but in materially poor communities of the developing countries, it is a matter of life or death.

Usually unable to read the instructions on a tin of formula, or to afford enough artificial milk over so many months, or to boil water every four hours or to sterlize the necessary equipment or to return to breast-feeding once she has stopped, the low-income mother in the developing world is spending a significant proportion of her small income in order to expose her child to the risk of malnutrition, infection and early death.

Various studies on breast-feeding found that in Brazil bottle-fed babies were 3-4 times more likely to be malnourished than breast-fed babies. In Egypt, the risk of infant deaths was 5 times greater in bottle-fed babies.

The advantages of breast milk begin with improved hygiene and nutrition but do not end there. In recent years, the immunological qualities of breast milk - and especially of the colostrum which proceeds it - have been more fully appreciated. In addition, the prolactin, which breast-feeding releases in the mother's own body is also a natural contraceptive, and although an unreliable form of family planning, from the individual mother's point of view, it nevertheless prevents several million conceptions a year in mothers who have not fully recovered from a previous pregnancy.

Breast-feeding is cheaper. The foreign exchange cost to the developing world of imported baby milk formula will run into billions of unnecessary dollars in the 1980s, and for individual families, the cost of feeding a baby on adequate quantities of milk works out at more than half a labourer's weekly wage in Uganda or Jamaica or Nigeria, or of a clerk's take-home pay in Sri Lanka or Indonesia. Not surprisingly, one recent study in Barbados found that three quarters of low-income families who have abandoned breast-feeding were stretching a four-day tin of baby milk to make it last anything between five days and three weeks. At this point, malnutrition is surely the result and the infants themselves pay the highest price.

Breast-feeding has declined steeply in the developing world during the past 20 years. (In industrialized countries breast-feeding, after a steep decline, is increasing again.) Among the main causes of this decline has been the spread of artificial infant formula the manufacturers of which looked outward from the stagnating markets of the industrialized countries in the 1960s and 70s and saw the potential of increasing sales among the large and rising infant populations of the developing world. And to a mother whose confidence may already be low in the face of more 'scientific' ideas and more 'modern' products imported from other cultures,

even the most innocent promotion 'for those who cannot breast-feed' or 'for mothers with insufficient milk' can create the anxiety which is one of the major causes for the decline in breast-feeding.

Adding this evidence of the decline in breast-feeding to the evidence of its clear advantages, shows a drastic and unnecessary increase in both malnutrition and infection for millions of young children. Campaigns to defend and promote breast-feeding, and to stop the spread of artificial substitutes, are therefore an indispensible underpinning of a child health revolution.

Such campaigns are now gathering momentum. Since the adoption by the 1981 World Health Assembly of the 'International Code of Marketing of Breast-Milk Substitutes' over 100 nations of the world have started the process of changing hospital practices, adopting marketing codes, and protecting infants from the threat of commercial baby-milk promotion. In eleven nations, all advertising of breast-milk substitutes to the public has been banned and in some, the distribution of free samples of infant food in maternity hospitals has also been prohibited.

IF BREAST-FEEDING IS TO PLAY ITS PART IN THE CHILD HEALTH REVOLUTION, THEN THE CAMPAIGN TO PROMOTE ITS ADVANTAGES WILL NEED TO TAKE ROOT IN THE COMMUNITY AS WELL AS IN THE HEALTH SERVICES. THE HEALTH SERVICES ALONE CANNOT GIVE THIS CAMPAIGN THE OUTREACH IT NOW NEEDS. COMMUNITY GROUPS, CIVIL ORGANIZATIONS AND ASSOCIATIONS, SCHOOLS, THE MASS-MEDIA AND OTHER GOVERNMENT SERVICES ALL HAVE A PART TO PLAY.

The informed support of the community in general, and men in particular, could do much to improve maternal and child health by understanding and accepting the fact that pregnant and lactating women need to work less and eat more. Because it is the mother who does most of the work involved in bearing and caring for children there is a tendency to talk about child health and growth as if it were the responsibility of the mother alone. But the truth is that few things could make such significant improvements to the lives of women and children as men knowing more and doing more about the raising of their young.

D. Expanded Immunization

Every six seconds a child dies and another is disabled from a disease against which there can be immunization. Many more suffer set-backs to normal health and growth.

Immunization against the six major communicable diseases of childhood - measles, tetanus, whooping cough, diphtheria, poliomyelitis and tuberculosis - costs approximately $5 per child - most of the $5 is for the delivery system - the vaccines themselves cost only 50 cents.

All of the immunizable diseases - but especially measles and whooping cough - are also driving forces in that cycle of malnutrition and infection which sets back the growth of millions of those who survive the infections themselves - often, the climb back to normal weight and growth takes several weeks. Immunization against the six main infectious diseases of childhood would therefore be a partial 'immunization' against malnutrition itself, and it is because it strikes against infection

and malnutrition that immunization is one of the sharpest tools for cutting into the vicious cycle and reducing the severity and frequency of set-backs to the normal development of the child in its most formative years.

The need to administer primary injections to infants at various periods (BCG at birth, DPT/Polio after the second month in three doses, measles at the ninth month) requires a well-organized delivery system and a vaccination plan. Add to this that vaccines have to be kept refrigerated from the day they are made to the day they are used with the difficulty of transport and communication, scattered populations, absence of electricity, shortage of fuel, scarcity of skilled man-power, a limited outreach of health services - all these make the task of immunization a difficult one.

To compound the problem, a majority of uneducated parents are reluctant to bring their children three or four times for vaccinations which may cause temporary fever and restless nights. The education and involvement of parents is therefore a greater challenge than the technology of vaccines or the financing of immunization campaigns.

Recently, the development of temperature-stable vaccines made it possible to have field vaccination campaigns with much less complex and expensive refrigeration technology. But even with the technological advances, a social breakthrough is needed - communities have to be ready for these campaigns and mothers must appreciate the value of vaccinations, demand their availability and, in many countries, seek them out.

In recent years, the growth of community organizations and the increase in the number of para-professional development workers has made the social organization of immunization more possible than ever before, but a great deal more is needed to reach out to all the communities. To solve the existing problems, immunization campaigns need to

be integrated into other PHC and community development networks which can provide continuity of contact between people and immunization services.

Money is important for vaccination campaigns, but more important still is the mass mobilization and the involvement of every possible means of communication in order to bring all parents to the point where they demand immunization for their children and understand that they must complete the full course of injections.

A THREE-FOLD SUPPORTIVE STRATEGY : "SOCIAL BREAKTHROUGHS"

Besides the above mentioned four-fold strategy, recent research in the developing world has highlighted three more sets of changes which, though deep-seated and therefore more difficult and more costly, are of such potential significance for the health and well-being of the world's children that they must also now be counted among the breakthroughs in knowledge which make possible a child revolution.

A. Food Supplements

All the above measures are ways which would help reduce malnutrition by helping to improve the use of available food - both in its use in the child's body and its allocation by the child's family. But these improvements can only go so far before running into the hard rock of the malnutrition problem - the lack of food itself - for if a family cannot provide enough calories, proteins and vitamins for a child's growth and health, then growth charts will flag the need for food in vain and malnutrition will become evident. For those who simply do not have enough to eat, the long-term solution lies in having either the land on which to grow food or the jobs and the incomes with which to buy it. However, this long-term solution of employment and land reform is too complex - what is needed in the meantime is a measure

to break the infernal cycle of malnutrition, ill-health, low energy, low productivity, low income and low level of financial and energy investment in improving family and community life which is perpetuated from one generation to another in poor families.

One of the least known but most important facts about infant deaths in the developing world is that the 10% - 15% of babies who are born with low birth weights (below 2,500 grms.) account for 30% - 40% of all deaths in the first year of life. Among those who survive, low birth weight has been shown to be associated with longer and more frequent illnesses and with mental and physical impairments.

Research in Guatemala and India has shown that a food supplement of only a few hundred calories a day given to women in the last three months of pregnancy could reduce the incidence of low birth weight and associated infant deaths by more than 50%.

Experience shows that breaking the cycle of malnutrition and ill-health could take place during pregnancy, lactation and weaning in the form of a food subsidy for the families of those who do not have the means to earn enough to buy the right amount of food in those vital stages of life. Interventions to get more food to undernourished pregnant women is almost certainly the most cost/effective single point at which to break into that cycle. For it is known that the nutritional well-being of the pregnant woman is the most decisive factor in the birth weight of the baby - and that the birth weight of the baby is the most decisive factor in its chances of survival. Applying this knowledge could therefore have a revolutionary impact on maternal and child care.

After the birth of the baby, the mother needs both the reserves built up during pregnancy and an adequate daily intake of food if she is to meet the new energy demands of breast-feeding and all the additional tasks of looking after an infant's health and well-being. For the very poorest mothers some kind of food supplements is therefore again indispensible if the energy needs of the mother and the child are to be met.

At the age of 5-6 months, breast milk alone is no longer sufficient for a child's needs and if the gradual introduction of other foods does not now begin, then weight gain falters, the growth curve flattens, the risk of infection increases and malnutrition takes a grip on the young child's life. Delaying weaning therefore gives millions of infants the first unintentional push down the slope of malnutrition.

Regular monthly weighing and the use of the growth charts is by far the best way for a mother to decide when weaning should begin. Immunization and oral rehydration therapy can help to combat the increased risk of infection and diarrhoea which comes when a child is weaned into more contact with food and water from the outside world. But it is just as important that the mother is able to give her child the right weaning foods in the right way and in the right quantities - and for that, she needs both the knowledge and the food.

DURING THE VULNERABLE WEANING PERIOD, NUTRITION EDUCATION IS THEREFORE AN IMPORTANT ELEMENT OF BASIC COMMUNITY SERVICES AND PRIMARY HEALTH CARE. HOWEVER, IT SHOULD NOT BE FORGOTTEN THAT AMONG THE VERY POOR THE LACK OF INCOME IS THE MAIN CONSTRAINT ON BETTER DIETS. SUBSIDIZED FOOD AT THE TIME OF WEANING, AS WELL

AS IN LATE PREGNANCY AND EARLY INFANCY, CAN, THEREFORE, BE THE SHARPEST MEANS OF CUTTING INTO THE CLOSED CIRCLE OF MALNUTRITION WHICH NOW TRAPS THE FAMILIES OF THE VERY POOR.

Difficulties exist in targeting such supplements to those who are most in need. Experience has shown that much of the supplements went to other members of the family or were used in the place of food which would normally have been bought. But given the potential benefit of food supplements to the health of the mothers and the children in greatest need, these problems cannot be regarded as insurmountable. Once again it is the combination of scientific and social progess which now offers a way forward.

If community development workers are to be involved in such schemes, then there would be obvious advantages in cost/effectiveness. It would enable the subsidized food to be targeted far more flexibly and precisely to those at risk. It would also mean that the subsidized food could be made available in poorer villages or neighbourhoods rather than whole regions or cities, at particular seasons rather than all the year round. If the community itself is also involved and informed, then the special needs of the most vulnerable groups are more likely to be understood and the supplementary food made available for them is more likely to be consumed by them.

The more promising way forward to provide the balanced weaning food which a child needs at a cost which the mother can afford is the spread of PHC workers and womens' organizations which can work with groups of mothers

to prepare affordable weaning foods within the community itself. This would avoid the cost of packaging, marketing, transport and storage. At the same time, it can be integrated with hygiene education - at no other time is the clealiness with which food is prepared and stored as important as it is during weaning.

At the same time, the use of growth charts can be introduced and used as a method of nutrition education, as a means of monitoring the nutritional status of a community's children, and as a device for identifying children who are at risk and in need of food supplements.

B. Family Spacing

Studies all around the world have shown that infant mortality rates for babies born within one year of a previous birth are between 2-4 times as high as for babies born after an interval of two years or more. This results from many factors, one of which is curtailed breast-feeding of the infant. If the child survives, the chances of it receiving adequate care, attention and stimulation in these early crucial years are less likely if the mother becomes pregnant again within a year.

The number of children the mother bears is also of significance. The risks associated with the fourth and higher pregnancies are far greater than the risks associated with the second or third pregnancy.

Maternal mortality and morbidity increases with parity (number of children). Studies in both industrialized and developing countries have shown that "too many" can be almost

as dangerous as "too close". Empowering mothers with the knowledge and the means to increase the interval between birth is a crucial contribution which family planning can make to health, as the major causes of mortality and morbidity in women are related to child bearing.

The problems associated to early child bearing (while the mother is still under the age of 18) have been well documented. They present hazards to both mother and child and include high infant mortality, low birth weight, increased incidence of toxaemia and haemorrhage associated with pregnancy. Women should, whenever possible, cease child bearing by the age of 35, particularly when adequate medical care cannot be ensured. Risks to the health of the mother and also the chances of conditions such as mongolism occuring in the child are higher when the mother is older than this.

These risks to life and health, summarized by "TOO CLOSE", "TOO MANY", "TOO OLD", *or* "TOO YOUNG" *hold true for all income groups though in each case the increase in risk is exacerbated by poverty.*

It is therefore essential, not only for ensuring the good health of the mother, but also through her the health of the family, to make available information, education and services for family planning as an important component of PHC. Birth spacing techniques should be available at village level. Village level health workers should be adequately trained to deliver these services.

An obvious question arises from the apparent conflict between the emphasis on child survival in the Child Health Revolution and the need of the majority of developing countries to slow down their rates of population growth. But it is a conflict which is dissolved by time, for when people become more confident that their existing children will survive, they tend to have fewer births. This is the principal reason why no nation has ever seen a significant and sustained fall in its birth rates without first seeing a fall in its child death rate.

The availability of family planning can shorten the time-lag between falling death rates and falling birth rates. But even if population growth were not a cause of concern, the availability of family planning would in itself have a crucial part to play in improving the health of mothers and children and reducing the rate of infant mortality, for too many births too close together undermine the health and nutritional well-being of both mothers and children.

Increasing women's own control over their own fertility is therefore a change which could clearly have a revolutionary impact on the health of the mothers and the growth and survival of their children.

C. Female Education

For almost all children, the most important primary health care worker is the mother for it is usually the mother's level of education and access to information which will decide whether or not she will get her child immunized, will breast-feed and will wean him on time with the best available foods. Around 400 million illiterate, malnourished and over burdened women have not yet been solicited and yet without their involvement or commitment PHC will never become a reality for most villages in the developing world.

All the eight main elements of PHC (see page 2) relate to the poor rural mother and need her involvement for implementation. *Education about local health problems is a key element.* The mother is most often the custodian of the health of her children and her family. She needs to be taught the basics of how to keep healthy, how to maintain personal hygiene, how to combat common health hazards. She must also know about the availability of health facilities, if any, in the neighbourhood.

Another key element is the supply of food and proper nutrition knowledge about the techniques of food preparation and storage, and the proper management of the food budget in terms of its nutritional content and cost are important for the mother. Many rural women work on the farms and they need to be more involved in efforts to improve the yield and the quality of nutrition or cash crops and animal husbandry. *They are also intimately involved in ensuring a safe water supply and hygienic sanitation.* In most rural villages, running water and toilets are non-existant. The women usually travel long distances each day to fetch water, it is seldom clean and is quite often contaminated.

Mothers need to know something about communicable diseases and how they are passed on. They need to be taught relevant techniques of food handling and water storage and should be aware of indiscriminate defaecation so that they can teach their children. Immunization of women and young children against major infectious diseases is another crucial element in PHC. It needs the mother's participation. She must know that immunization is important for her children and for herself.

The mother must also know about the prevention and control of endemic diseases. She needs to be taught to recognize the signs and symptoms of the locally-endemic diseases and to be in a position to seek help when a member of her family or she herself is showing signs of these diseases. Treatment of common diseases and accidents is another important aspect of PHC.

With young children, diarrhoeal diseases are especially common. Treatment must be started early, the child will require extra fluids, and suitable home-made solutions to prevent dehydration. *Mothers should also be able to recognize and seek help if signs and symptoms of dehydration occur.* Early weaning is a common cause of diarrhoea in the infant. Encouraging breast-feeding is also important, not only in preventing diarrhoea but also in ensuring adequate nutrition for the young child.

If the mother is the focal point of PHC at home, as she is, her own health is of special importance. One of the major causes of mortality and morbidity in women is that related to child bearing, therefore Maternal and Child Health Care including family spacing has a special priority.

Empowering women by education is therefore the third of the improvements in the lives of women which could also have a revolutionary impact on the well-being of children. Whether she enters the work-force or not, investing in a minimum of four years at school for every girl is one of the most cost/effective investments which any country can make in its own future.

All around the world, separate studies have established that the level of the mother's education - even within the same economic class - is a key determinant of her children's health. The education of the mothers is another of those "social breakthroughs" which can now help put "technological breakthroughs" into the hands of those who need them.

ANY ATTEMPT TO PROMOTE THE ADVANTAGES OF BREAST-FEEDING, OR TO WARN OF THE DANGERS OF BOTTLE-FEEDING, OR TO SPREAD THE KNOWLEDGE

OF ORAL REHYDRATION THERAPY, OR TO ORGANIZE IMMUNIZATION CAMPAIGNS AT SET TIMES AND PLACES, OR TO INTRODUCE THE USE OF GROWTH MONITORING CHARTS, OR FAMILY SPACING METHODS STANDS CONSIDERABLY MORE CHANCE OF SUCCESS IF THE LOCAL WOMEN HAVE A MINIMUM EDUCATION. FOR ANY MOTHER WHO IS LITERATE HAS MORE OPPORTUNITY TO LEARN ABOUT NEW IDEAS AND MORE CONFIDENCE TO PUT THEM INTO PRACTICE.

CHAPTER III

EDUCATION FOR PRIMARY HEALTH CARE

Education is fundamentally concerned with the enhancement of the quality of life in the sense that, in whatever way quality of life is defined, education is a potential input into its attainement at the level both of the individual and of society at large.

The criteria which are most often used to compare the quality of life in various countries are:

- *infant mortality rate;*
- *literacy rate;*
- *life expectency rate; and*
- *per-capita income.*

The instrumental role of education in regard to the attainment of quality of life can be illustrated by two examples - consider food and nutrition.

The availability of food is a function partly of the bounty of nature, partly of the technology of food production which requires an essential input in the form of basic and applied research

to make the most of nature, and partly of nutritional knowledge and practice which again have an educational component - cognitive, affective and psychomotor. Nutritional knowledge and practice are related to the kinds of food that are needed to constitute a balanced diet and how they should be prepared to retain their nutritive value to the maximum extent while being satisfying to the palate.

Health is another factor important to the quality of life. The state of health knowledge accumulated over the years is the result of education and research. The transmission of that knowledge to health and medical personnel is also a matter of education, and the acquisition and utilization of health knowledge by the ordinary individual pre-supposes information gained through the educational process.

In short, whatever facet of quality of life is considered, a critical role may be discerned for education in promoting its attainment. This may be the desired norm rather than the present reality and this consideration should form the basis for any concern for the improvememnt of the quality of life which would imply a concern for education.

The Universal Declaration of Human Rights states "that everyone has the right to education"; yet we find out that even today still educational provision is seldom spread out evenly throughout a country and this is more so in developing countries.

Two disadvantaged population groups are characteristic of all developing countries - the female and the rural population. Because of their difficulty of access to health services, these same population groups need special attention in education for primary health care. It is assumed that, with education, there would be a greater acquisition of health knowledge and readiness to use it, and also a greater propensity to seek both preventive and curative health services in the community.

EDUCATION AS LIFE LONG LEARNING +/

There is a growing recognition the world over that education can no longer be viewed as a time-bound, place-bound process. In contrast to the view that equates education with schooling, and measures it by years of exposure, it is now a widely accepted fact that education should be equated with learning, regardless of where, when or how the learning occurs.

Education, thus defined, embraces much more than the conventional 'academic' skills and subject matter. It includes also the acquisition of occupational/household skills (commonly called training), the development of analytical modes of thinking, the formation of attitudes, values and aspirations, the assimilation of pertinent knowledge and information of many sorts. These different kinds of learning vary greatly in their depth and complexity; in the time, effort and maturity required to attain them; in their degree of generality, specificity and transferability to new situations; in their inherent value and durability. Yet all of them, if relevant to the circumstances, can enhance human capabilities and the behaviour of both individuals and communities.

This learning-centred view of education obliges us to start our analysis with the clients and their needs before moving on to consider alternative means for meeting these needs. It obliges us to recognize that education by its very nature is a continuous process, starting from earliest infancy through adulthood, that necessarily entails a variety of methods and sources of learning. These learning methods can be grouped into three categories (recognizing that there is overlap and a high degree of interaction between them).

1. Informal education.

2. Non-formal education.

3. Formal education.

+/ New Paths to Learning, Coombs, Prosser and Ahmed, UNICEF, ICED, 1973, pp. 9-12.

Informal education means the true life-long process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment - family and neighbours, work and play, market place, library and the mass media. Through informal education, a daughter learns child care and cooking from helping and observing her mother, a son picks up occupational skills from his father and children and adolescents learn from their peers. For the most part this process is relatively unorganized and unsystematic (hence the rubric 'informal'). Yet, it unquestionably accounts for a very high proportion of all that any person - even a highly schooled one - accumulates in a lifetime.

Non-formal education is any organized educational activity outside the established formal system that is intended to serve identifiable learning groups and learning objectives (sometimes it is referred to as out-of-school). Examples of non-formal education are adult literacy classes; adult vocational training; classes in mothercraft and child care; home economics; etc.

Formal education is the hierarchically-structured, chronologically-graded education system running from primary school through to university and including, in addition to general academic studies, a variety of specialized programmes and institutions for full-time technical and professional training.

Formal and non-formal education are alike in that both have been organized by societies to augment and improve upon the informal learning process - in other words, to promote and facilitate certain valued types of learning that individuals cannot as readily or as quickly acquire through exposure to the environment. They differ mainly in the institutional arrangement and procedures and to a considerable extent in their subject matter and learning clienteles.

MINIMUM ESSENTIAL LEARNING NEEDS +/

To size up the educational requirements for a better quality of life and to plan provisions for meeting them, one must first have a realistic conception of their minimum essential learning needs.

Although these differ from one locality to another, six elements are suggested as illustrative of a minimum package:

a) *Positive attitudes towards co-operation with, and help to, one's family and fellow men, towards work and community and national development, and towards continued learning and development of values.*

b) *Functional literacy and numeracy.*

c) *A scientific outlook and an elementary understanding of the processes of nature in their particular area, as they pertain to health and nutrition, food storage and preparation, and the environment and its protection.*

d) *Functional knowledge and skills for raising a family and running a house (family health, family planning, child care, nutrition and sanitation, care of the injured and sick, intelligent shopping and use of money, environmental improvement, growing and preserving food for family consumption).*

e) *Functional knowledge and skills for earning a living.*

f) *Functional knowledge and skills for civic participation.*

+/ Ibid, pp. 13-16.

What is clear from the list of minimum learning needs is that no one mode or institution of education - informal, non-formal or formal - is capable, by itself, of meeting all the minimum essential learning needs.

Many options are available for combining the three basic modes of education in various ways to satisfy the common essential learning needs. The one option not available (if the job is to get done) is to concentrate all resources and efforts on simply enlarging formal and non-formal educational programmes as they now stand. Apart from the resource constraints that rule out such a strategy of linear expansion, all these programmes urgently require re-design and reform, and better integration and supplementation by innovative new programmes.

In recent years, and since the Alma Ata Conference, many nations have drawn up specific plans for implementing the PHC approach and many have already trained large numbers of para-medical staff. The spread of PHC networks is an important thrust in the social and organizational breakthroughs which are the essential counterparts to the technological breakthroughs now available. Equally important, however, are the opening of communication channels, the spread of education, and the rise in the numbers of organized communities, action groups and volunteer organizations throughout the developing world.

Two critical issues arise when one reviews the educational activities related to PHC in developing countries:

1. How to spread educational opportunities to meet the minimum essential learning

needs of many millions of priority groups (mainly women and rural people).

2. *How to improve the quality and effectiveness of existing and prospective educational activities.*

The first issue is quantitative: *how to close the enormous gap between the educational services that exist and what is needed.* Most of the efforts are limited to geographical areas and in the aggregate scarcely scratch the surface of the essential educational needs of millions of people living in the developing world.

A second important issue concerns *the real distribution of educational opportunities in the developing world.* The over-all picture is not a bright one and some sub-populations are especially severely deprived and require special attention.

Evidence shows that those who are deprived of formal education are similarily most deprived of educational opportunity through non-formal means. The most seriously neglected groups are the rural school age children who are not at school, and adolescents who have not been to school or who dropped out early - among these girls are particularly deprived.

There are, of course, some programmes for child care, nutrition, and health and community development, but these have limited coverage and often limited impact even on those who participate. Programmes for girls or women are often only on a token scale and are seemingly based on the assumption that the place for rural women is solely in the home, with attention, therefore, to such subjects as home economics, child care, cooking and sewing.

THE IMPORTANT ECONOMIC AND OCCUPATIONAL ROLES PLAYED BY GIRLS AND WOMEN IN BOTH TRADITIONAL AND MODERNIZING RURAL SOCIETIES AND THEIR ROLE IN EDUCATING THE NEXT GENERATION HAVE BEEN SERIOUSLY OVERLOOKED JUDGING BY THE QUALITY AND EXTENT OF EDUCATIONAL OPPORTUNITIES FOR GIRLS.

Education for PHC aims at influencing and changing the behaviour of people in an effort to assist them to raise their standards of living.

Many efforts have been undertaken and it has been increasingly recognized that educational programmes based on simplistic and indoctrinative aspects of Information-Education-Communication (IEC) would not be sufficient for success. It has been generally accepted that the success of a health education programme in changing the health behaviour of people depends to a large extent on the attitudes and values of people regarding their own health and what they could do about it. It is therefore of crucial importance that positive attitudes and values towards health, nutrition and the environment should be developed. Education, whether informal, non-formal or formal, can be a most dynamic and influential tool for inducing such changes.

THE CONCEPT OF EDUCATION FOR PHC

Education for PHC is the process of developing awareness and understanding of the health situation of a community as well as rational attitudes and behaviours towards that situation for the attainment of a better quality of life for the individual, the family, and the community.

Education for PHC is an educational programme designed to make people aware of their own health situation, the factors leading to that situation, how that situation affects the many aspects of life that in turn determine their quality of life and the changes they themselves can bring about.

PHC education is a part of the over-all national development efforts to improve the individual and national quality of life. This quality of life can be achieved only through the concerted efforts of all people in the society rather than of a few select groups.

The general goal of education for PHC is to involve people in a learning process which will enable them to broaden their understanding of their own living conditions, and to develop in them appropriate skills to define and analyse the problems they face so that ultimately they will be able to make rational and responsible decisions to overcome these problems and improve their own quality of life.

THE CONTENT OF EDUCATION FOR PHC

As the idea of PHC is a new one, there is yet no empirical evidence that the teaching of any particular content in health education will produce the desired results but health education experts in many countries agree that the teaching of certain contents will most likely lead to the realization of PHC.

An analysis of the contents of health education curricular in various countries will show that while there are no identical content outlines there is a great deal of commonality about them that one can identify the central concerns and emphases for healthful living. This is due to the fact that curricula in various countries

have been developed to suit socio-cultural situations as well as the educational needs of a country, while at the same time respecting the sensitivities and customs of target clientele.

Selecting and outlining the content of education for PHC for out-of-school programmes presents more problems than for in-school programmes. These difficulties arise from the fact that target audiences in out-of-school education are so diverse in regard to needs and characteristics such as age, marital status, interests, educational level, literacy, occupation, religion, socio-economic status, language, habits as regards reading and use of mass-media, etc. This diversity of target groups is compounded further by the fact that they may be captive audiences and available for educational programmes for varying periods of time. Their availability of time may range from a single exposure of an hour or so, to several hours of instruction which is spread over days and weeks.

In the light of these diversities, it is clear that no uniform curricular content can be planned for all the various target groups of out-of-school PHC education. What might be appropriate for one group might not be appropriate for another. The content will have to be chosen on the basis of the problems and needs of specific target groups.

STRATEGIES AND APPROACHES

Education for PHC should create both an UNDERSTANDING and a COMMITMENT - an understanding of the potentiality of man in solving his problems and his commitment to work towards what he aspires to be, in the knowledge, belief, hope and conviction that change is possible.

There is nothing that can be imposed from above or by an outsider, it is an upward movement which should start from the people, a mental process that can happen only when members of a community have determined on an aim and have decided to work together to achieve it.

The actual input that should be expected as the educational component of PHC includes:

a) informing policy makers about the PHC approach, its value and its place within a socio-economic development programme;

b) health education of other community members focusing on education for involvement and education with reference to specific local problems involving the entire community as well as specific groups;

c) health education in the training of PHC workers, including assistance in the production of simple manuals, guides and other technical publications to ensure a pedagogically sound approach.

The Alma Ata Conference in 1978 emphasized the "importance of full and organized community participation and ultimate self-reliance with individuals, families and communities assuming more responsibility for their own health". One of the means of attaining the objectives of PHC is through health education. If one must modify health behaviour to a more positive direction, then one should start by understanding the forces affecting behaviour.

The behavioural sciences have contributed greatly to the understanding of the cause and effect relationships between education

and potential health benefits. The new scope of intermediate variables implied by modern practices of health education can be divided broadly into three types of factors assumed to be influencing health behaviour and modifiable by educational intervention. These three sets of factors are: +/

- *pre-disposing factors;*
- *enabling factors;*
- *reinforcing factors.*

Pre-disposing factors including the traditional targets of education: knowledge, attitudes and beliefs, plus a few new variables also modifiable by means of direct communication and information. The new variables in this category include values and perceptions which require more interactive communication to clarify and adjust inconsistencies in values and misperceptions of reality. The defining characteristic of pre-disposing factors is their motivational force prior to the decision to take a given health action.

Enabling factors include the skills and other resources required by patients, consumers, or students to carry out an action, whether they are motivated to do so or not. These call for educational methods more commonly associated with training to build a repertoire of skills and automatic recall of information or the recognition of symptoms required to act on specific occasions. The ability to recognize dehydration warning signs, recall weaning methods, and skill in estimating relative risks are examples of enabling factor.

+/ Green, L.: Reconciling Policy in Health Education and Primary Health Care. International Journal of Health Education. Supp. to Vol. XXIV N°B, July-Sept. 1981, p.78

On a broader scale, the enabling factors may call for some community health education, some family education or some staff education and organizational development within the health care system, the school or the community to assure that the resources needed by patients, students, or community members to carry out the prescribed actions are accessible. The availability of healthy foods in the community must concern PHC workers who find themselves recommending health practices that are blocked by circumstances. When the forces required to change these circumstances or to mobilize the needed resources go beyond education, the PHC worker must collaborate with others in a broader enterprise involving other agencies working in the community (agriculture extension, home economics, community development, women and youth groups, etc.).

Reinforcing factors include token or tangible rewards for successful trials or test performance but more so, those factors associated with social learning. One of the most fruitful lines of theory and research in recent health education efforts has been with concepts of 'inoculation' against peer pressure in which children are reinforced for demonstrating skills in declining or resisting the offer of a cigarette or pressure to accept drugs against their better judgement - the assumed causes of behaviour being largely social or peer influence.

The most effective educational programmes for the promotion of health are those that combine learning experiences directing at all three sets of factors influencing behaviour, based on an educational diagnosis of the predominant variable in each category. A behaviour that

is highly motivated and reinforced will be frustrated if it is not also enabled. A motivated and enabled behaviour that meets with social punishment or ridicule rather than reinforcement will not persist.

Of the three sets of factors - pre-disposing, enabling and reinforcing - those that reinforce (reward or punish) health behaviour are likely to be most influential in relation to the development of the more complex types of behaviour expected of individuals and communities in the PHC approach. Reinforcing factors determine whether a behaviour that is motivated and enabled will persist once it has been tried. Depending on the quality of the feedback received, especially social support, in response to the behaviour, the pattern of behaviour is more likely to persist.

Patient education in primary care setting is ideal suited to offer some reinforcement for healthy behaviour but the most important sources of reinforcement are beyond the control of medical personnel. These sources include the family, mass-media and peer influences, in that order of dominance for children, but with peer influence increasing with age and eventually surpassing the family in social influence on adolescents and adults.

IF MASS-MEDIA AND PEER PRESSURE ARE BEYOND THE DIRECT CONTROL OF THOSE RESPONSIBLE FOR PHC EDUCATION IN THE COMMUNITY SETTING AND THE SCHOOL, THE MOST PROMISING CONTRIBUTION APPEARS TO BE IN PREPARING CHILDREN AND ADULTS TO RECOGNIZE, AND TO BE ABLE TO RESIST MASS-MEDIA AND PEER PRESSURES TO ADOPT UNHEALTHY PRACTICES.

CHAPTER IV

NON-FORMAL EDUCATION FOR PHC

Health is largely a function of the socio-economic conditions of a people and those conditions are a function of the level of education of a people.

> *In the developing countries, the lower the per-capita income, the greater the incidence of ill-health. The vast majority of those low-income groups live in the rural areas, necessitating a concentration of efforts in that sector. Though curative health services have very little effect on the incidence of disease, the urban disadvantaged have at least access to curative health which is denied to most rural dwellers.*

Considering the aims of PHC (serving the under-privileged), these deprived populations are the ones on whom attention should be focussed since their distance/ difficulty of access to educational/health/ transport services and other services limit their use of available services (which vary in quality and quantity).

In considering ways and means of promoting PHC through non-formal education in any developing country, one has to face the enormity of the task and deal with organizational problems such as resources (both human

and material) that are necessary for a successful implementation of any programme. Decisions have to be made regarding the following

- at what level to operate;
- what mechanisms are built in, to ensure the intersectoral co-operation and co-ordination among the activity areas such as health, education and agriculture.

Designing an adult education programme is a challenge to field workers. Many programmes face the constraint of the "lack of motivation" for learning on the part of the adults, especially the illiterates and the poor. This is not difficult to understand. People have often been told that many big things are being done for their benefit and these often have not even met their basic needs like food and shelter. Apathy for learning usually comes from the lack of relevance of the learning situation to these needs. What they want is help in finding solutions to their most urgent problems and anxieties.

Logically people in such a situation can be drawn into any activity, including the learning activity, only when it is oriented towards solving their anxieties and problems. That is why education for PHC has to be integrated with various development programmes - water schemes, agriculture and food production, literacy, family planning, employment and others which attempt at answering the more immediate needs of the people.

The struggle between conformity and innovation directly affect the operation and success of non-formal educational programmes (approaches, educational methods and media, staffing facilities, cost and resources and programme evaluation.

Non-formal education potentially enjoys far greater flexibility than does formal education in its choice of teaching and learning methods and has fewer inhibitions against exercising this birthright. An important issue, however, is whether these natural advantages are sufficiently exploited, not only to benefit non-formal programmes themselves but to test innovations that formal education might adopt.

Many non-formal programmes employ methods rarely found in formal education - "inquiry approach", "active learning", "learning by doing", "peer teaching". These more dynamic and flexible methods often help to meet essential learning needs beyond those covered by conventional classroom instruction. Their effectiveness depends heavily on the motivation of the learners and on the ingenuity and enthusiasm of the instructors and group leaders.

PLANNING STRATEGIES

A good educational programme does not just happen, it has to be developed. Programme development paves the way for a meaningful system for directing the educator's efforts to attain certain specific objectives that are formulated to help adult learners find more satisfaction in educational experiences for which they would have practical use in improving their lives.

Any educational programme concerned with the improvement of the quality of life and the general welfare of people must be so developed as to help solve problems

and meet the needs, interests and aspirations of the individual, the family group and the community. The programme should therefore be individual, family, and communty based if such programmes are to be meaningful.

1. Individual approach. In this approach the field worker begins by approaching individuals personally.

****
* *
* LOCAL LEADERS ARE KEY FIGURES *
* IN THIS APPROACH TO ESTABLISH *
* CREDIBILITY AND FRIENDSHIP. *
* *
****

2. Family approach. This approach involves all the members of the family.

****
* *
* THE FIELD WORKERS SHOULD BE AWARE *
* OF THE INFLUENCE THAT MEMBERS *
* HAVE ON EACH OTHER, PARTICULARLY *
* IN THE DECISION-MAKING PATTERN *
* OF THE FAMILY. *
* *
****

Reinforcing factors should be the basis of this approach.

3. The special interest or group approach. Women's groups, youth groups, other civic groupings provide opportunities for group discussions on topics which matter to them and their community. Such groups can even be informal.

****
* *
* FIELD WORKERS, BY LISTENING TO *
* THE CONVERSATIONS OF SUCH GROUPS, *

WOULD BE ABLE TO IDENTIFY THE COMMON PROBLEMS AND NEEDS PEOPLE EXPRESS AND THIS COULD LEAD TO ORGANIZED ACTION. THEIR ROLE WOULD BE TO PLANT IDEAS, ENCOURAGE PEOPLE, ANALYSE SITUATIONS, ASSIST IN PLANNING AND ENSURING ACTIONS RESULTING IN SATISFACTION AMONG THE PEOPLE WITH WHOM THEY WORK.

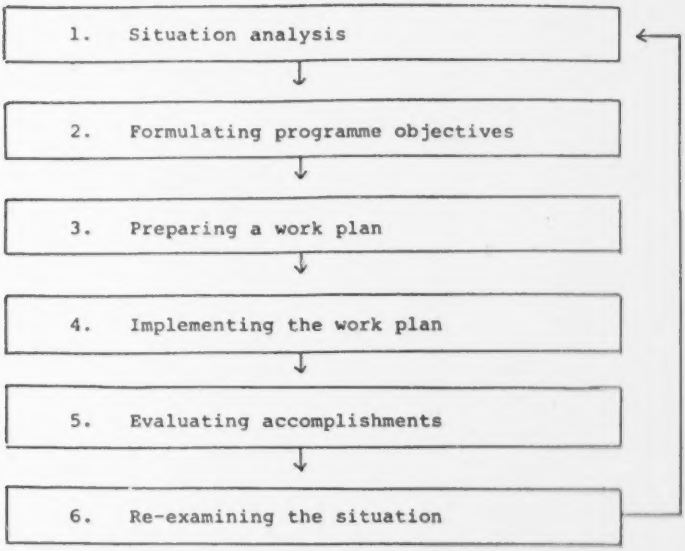
4. Integrated or village approach. Co-operation and co-ordination among different development programmes, both governmental and private, is most essential in the development of an integrated programme aimed at meeting the needs of the population in the village.

A COMMON UNDERSTANDING OF THE GOALS TO BE ATTAINED MUST BE ESTABLISHED FOR EVERY MEMBER OF THE TEAM.

A plan of the educational programme intended for the village must be clearly set out.

PROGRAMME DEVELOPMENT PROCESS

Programme development is a continuing and repeating cycle of steps that frequently overlap each other. There is no short cut to the process. It involves the following steps :


1. Situation analysis
2. Formulating programme objectives
3. Preparing a work plan
4. Implementing the work plan
5. Evaluating accomplishments
6. Re-examining the situation

Evaluation is a built-in process, at each step evaluation forms the basis for decision planning and action as one moves from one step to another.

PRIORITY GROUPS AND PRIORITY PROBLEMS

The basic health problems of the developing nations are:

- high infant mortality rate;
- malnutrition;
- environmental sanitation (faecally transmitted diseases/water and air diseases); and
- the lack of preventive, curative and rehabilitative health care.

The corresponding remedies for improved health are :

- better child care;
- improved water supply and sanitation;
- healthy living conditions;
- better nutrition; and
- the spacing of pregnancies and child birth.

Most of these are obviously tied up with the socio-economic conditions (housing, for example). However, some are due to poverty of knowledge, certain life-styles and cultural practices (such as nutrition, sanitation). These are within the power of the people themselves to remedy through their own efforts if properly informed and motivated. It is here that education is imperative.

The educational effort, especially through non-formal channels may be directed at health problems - however priority attention should be given to widespread problems. It is well known that infants and children, pregnant and lactating mothers are the most vulnerable groups from the health point of view. In any health education programme they should receive special attention.

STRATEGIES OF IMPLEMENTATION

A. Understanding the People

The extent of resources required, the kind of direction that has to be provided and the success or failure of the programme will depend on the vision and philosophy based on which the strategies are planned.

The planners have to be very knowledgeable of the socio-economic and cultural backgrounds and the outlook of rural people - understanding their ways of thinking, their traditions, norms and values, their practices - all these

have to be understood and respected. Acceptance and accommodation of these norms and values, which are in keeping with what is sought to be introduced, will go a long way towards the success of any educational movement.

B. Ensuring Pariticipation of the People

Any non-formal education programme should be a participatory one :

i. If the people participate in planning from the beginning, organisers could get first-hand knowledge of the problems facing the community, their health needs and ways of overcoming the problems. People know what is feasible and what is not and what will go down with the people and what will not. These have to be carefully considered.

ii. This participation will promote a self-reliant development coming from the people themselves. A programme will succeed if it is in harmony with the character of the people, their ways of thinking and doing things.

iii. If people are involved in the planning, implementation and evaluation, they will be motivated to ensure the success as they will feel it is their own programme and not one imposed from above.

In getting the people to participate, it is necessary to get those who are accepted by the people to represent them (different groups and structures, emerging patterns of entrepreneurship).

Women have to be represented in all activities as they are the cornerstones of the families

and communities (child birth, maternal and child health care, food, sanitation, drinking water, are the responsibilities of women and at the same time they are the most important health problems in rural areas). However, the participation of women has to be worked out within the socio-cultural and religious traditions.

Ensuring the participation of rural people, especially women, will ensure that the programme will meet with their approval.

Health impinges on cultural practices, social norms and values and lifestyles. One has to be careful that where it is necessary to break into these hallowed premises, it is done with due planning in consultation with the people, mindful of the resistance that such forays can encounter.

People's participation will tend to promote conformity with these practices that are essentially sound from a health point of view, especially in matters such as nutrition and hygiene. It is easy to foster those practices that are part of their accepted values and lifestyles. Their advocacy will also breed confidence in the programme.

Community participation will ensure realistic, down-to-earth programmes. Strategies to get people's participation have to be evolved in line with the factors in each situation. The school enlisting the co-operation of village-level workers, both public and private (teachers, agricultural extension officers, para-medical and public health personnel, private medical practitioners, rural development officers, etc.) can play a focal role as is the case in the Sri Lankan experience.

Mass media can play a motivational supportive role of building up participation in community projects in the field of which workers (health educators, rural development workers) play the role of change agents.

The strategies can vary from country to country but ensuring the community's participation and influening their social structure is basic. Sociological and psychological research findings should provide useful guidance.

****
*
* WHATEVER STRATEGY IS ADOPTED, THE INFORMATION, *
* EDUCATION, COMMUNICATION COMPONENTS MUST *
* FIRST SENSITIZE THE PEOPLE TO THEIR NEEDS *
* AND ONLY THEN COULD ACTION FOLLOW. *
*
****

C. Integration with Related Services and On-Going Activities

The Alma Ata recommendations lay down the need for inter-sectoral co-operation as one of the guidelines for action. Any scheme for overall integrated development should provide for the health care of the people.

****
*
* *The absence of health will be reflected in* *
* *lower productivity and waste in human potential* *
* *and the non-utilization of a country's human* *
* *and natural resources. This in turn will* *
* *result in lowered output and impoverishment,* *
* *leading to scarcities of resources for consump-* *
* *tion. This is why at the village level, any* *
* *movement, whether rural development, agricul-* *
* *ture, vocational training, education and* *
* *health should come together and integrate* *
* *their strategies.* *
*
****

This will require the surveying for field opportunities and points of entry. If programme and project sponsors have not provided for the inclusion of health aspects into such projects, then it is the health professionals (educators) who should intercede to win their co-operation and support. Such opportunities should be utilized to the fullest. Example :

- inclusion of health education in programmes of vocational training (considering the unique opportunity which such training provides to equip a person with education for everyday life, such subjects as nutrition, preventive aspects of health and family planning should be included);
- inclusion of health subjects in agriculture extension. Farmers need to know about nutrition, preventive and promotive health, family planning, community development, as well as agrarian services.

Schools can make a great contribution to national development. The teachers and students, while learning from the community, can also serve the community. The Paraguayian experience in its use of the school teachers as providers of basic health care is worth studying as are the Indian experience of including nutrition and health education in functional literacy programmes, the Mexican and Costa Rican experiences of educating people when they come to the health centres and posts, and the Chinese experience of bare-foot doctors visiting people at work.

****
* IN ALL THESE EFFORTS, THERE IS AN ATTEMPT *
* TO COMBINE HEALTH EDUCATION WITH SIMPLE *
* DIAGNOSTIC AND THERAPEUTIC CARE. A NEW APPROACH *
* IS, HOWEVER, NEEDED TO COMMUNICATE WITH THE *
* COMMUNITY - ESPECIALLY MOTHERS. BY EXPANDING *
* THE ORGANIZATIONAL DIMENSION OF HEALTH CARE *
* TO EMBRACE MOTHERS IN AN ACTIVE, RESPONSIBLE *
****

WAY, CRITICAL, SIMPLE TECHNOLOGIES CAN REACH EVERYONE - EVEN IN THE REMOTEST AREAS. WITH HIGH COVERAGE, TOTAL HEALTH IMPACT WILL BE MAXIMIZED.

AN ILLUSTRATIVE APPROACH IN NON-FORMAL EDUCATION TO REDUCE INFANT MORTALITY

If we take infant mortality as the most serious challenge to technology and administration (17 million deaths from birth to 5 years annually) diarrhoea accounts for 5 million, immunizable diseases such as measles cause 1 1/2 million, neonatal tetanus 1 million, pertusis 600,000 or more while 100 million children suffer severe or mild malnutrition.

To face these problems, community involvement is essential even when technologies can theoretically solve the problem through active medical outreach to a relatively passive population - such as vaccination campaigns, but even then, mothers have to appreciate their value, demand their availability and seek them out. 4/ The impact of any health programme is a function of both quality and coverage and the key lies in the involvement of people in their own health care to achieve a situation where services reach everyone, everywhere. At present, in developing countries, 75% of the manpower and money are found in urban areas where only 25% of the population lives.

Before preparing an education programme directed at reducing the IMR, one has to determine the factors leading to an unacceptably high IMR; this requires the efforts of people knowledgeable in matters affecting the health of mothers and children in the countries concerned.

Five stages of human developmemnt and an effect on IMR. 2/

Stages of Human Development	Factors Affecting the Survival of the Child
a) Development of the mother	i) Health of the grandmother ii) Feeding of the mother as an infant, adolescent and woman iii) Sanitary conditions of the mother's home iv) Availability of safe drinking water v) Opportunity for physical development, including exercise vi) Health services--preventive and curative vii) Father's, mother's and other societal members' knowledge of child and adolescent upbringing needs
b) The time of conception	i) Health of the mother ii) Health of the father iii) Age of the mother iv) Age of the father v) Time since last conception vi) Time since last birth
c) The period of gestation	i) Diet of the mother, including unhealthy intake ii) Health of mother, including harmful habits iii) Physical status, including appropriate rest and exercise iv) Father's and other societal members' knowledge of physical and emotional needs of pregnant women
d) The time of birth	i) Hygiene conditions ii) Competence of birth attendant

Stages of Human Development	Factors Affecting the Survival of the Child
e) The first year of life	i) Diet of the mother, including unhealthy intake ii) Health of the mother, including harmful practices iii) Health of the child iv) Hygienic conditions v) Availability of safe drinking water vi) Appropriate rest and exercise for the mother and child vii) Mother's knowledge of child-rearing practices viii) Father's, grandparents' and other societal members' knowledge of child-rearing practices ix) Supplementary feeding of the child after six months of breast-feeding x) Feeding of children whose mother's milk is deficient.

This partial list of needs for child survival to the age of 12 months gives an idea of the educational task confronting those wishing to reduce the IMR. The problem in most countries will be to decide <u>when</u> and <u>where</u> an appropriate educational message is to be delivered. It is necessary to study and understand the prevailing concepts, beliefs and customs about health and disease. Some of these are good and should be preserved and strengthened. Many others are unscientific and harmful (not to give water when a child has diarrhoea). Similarly there are many harmful traditions with regard to pregnancy, mother and child nutrition and care of the sick. These

have to be corrected through careful instruction. Priorities should be established in health education. Any attempt to bring about too many changes at once will be self-defeating. 6/

In identifying educational interventions, the following questions should be raised : 3/

- what type of educational interventions would have a bearing on each of those factors;
- how could these types of educational interventions be subdivided into specific educational activities;
- how could these activities be expected to contribute to the reduction of each of the components of infant mortality;
- who could be able to pursue these activities effectively;
- when should these activities begin and on which time base should they be pursued;
- what resource inputs - human, material, financial and time - are required;
- what monitoring/evaluation is feasible? When? By whom?

Any answer/decision related to these questions has to be based on data. Data collection and surveys should constitute the initial action to be undertaken in any effort to reduce IMR in any country or region. However, action need not be delayed pending the collection and analysis of data. Certain educational actions are feasible on the basis of present knowledge of factors and these can be progressively refined or modified as the understanding of specific factors improves.

Joh Rohde in "Why the Other Half Dies" identifies four dimensions of child mortality :

- Epidemiological dimension shows that below the age of five, 60 to 70% of deaths are caused by diarrhoea, pneumonia, contagious infections. Contributing to and underlying all of them is malnutrition.

- Technological dimension. Effective vaccines, improvement of maternal nutrition to reduce low birth weight in children, and reducing fertility in higher risk groups of women, improve infant and child survival. ORT reduces high mortality levels by 50%.

- Organizational dimension. Where responsibility for health has been shifted to the consumer, accompanied by appropriate technology and the understanding of how to use it, dramatic reductions in deaths and extensive changes in health-related behaviour has occurred.

Rohde advocates a new approach to communicating with mothers :

- start from where the mother is (a dehydrated plant dies, a pot with a hole will soon go dry);

- it is the drinking that is the key element of oral rehydration;

- it is absolutely critical to assure the wide availability of a product before we attempt to market it;

- a marketing strategy must be consistent at all levels of the health system. A message should be uniform throughout the entire system, adding credibility to the basic message;

- a message must be simple, clear, precise and easy to remember, e.g. Growth is Health.

By expanding the organizational dimension of health care to embrace mothers in an active, responsible way, the critical technologies can reach everyone. With high coverage, total health impact will be maximized.

- Political dimension

  - Decision-makers must be aware of the problem of infant mortality, its precise nature, its magnitude and whom it affects.

  - They must be shown an effective and affordable solution. The technology is available, cheap and effective (GOBI). 4/

CREATING AND COMMUNICATING SUITABLE MESSAGES

Three questions have to be answered :

- what information is relevant to the population;
- in what form should it be presented;
- how can it best be channelled to the target groups.

Based on the above mentioned lists, to reduce IMR, one has to highlight the following :

1. Nutrition of the mother-to-be;
2. Spacing of pregnancies and births;
3. Breast-feeding;
4. Appropriate weaning;
5. Vaccination
6. Oral rehydration;
7. Growth monitoring.

"A generalized campaign directed at minimizing infant mortality is likely to be only marginally effective, as information alone does not influence behaviour, unless it is actively designed to influence values, attributes and life-styles and is carefully directed to selected target groups. This is because the decisions to adopt a particular behaviour, or not to adopt it, are often impulsive, emotional decisions, rather than rational

ones. Such decisions are influenced more by socio-cultural factors and by the way the receiver views the person giving the information." 5/ "...a basic education programme with appropriate components of health, sanitation, hygiene, and nutrition education directed towards young mothers who are actually in need of such information and who are able to use the information immediately - may be adopted to succeed in getting the participants to apply the learning (or a significant part of it) to their own personal situations."

The educational interventions and the messages should be skillfully used, directed to defined objectives. The perceived source of the message must be seen both as credible or expert and trustworthy by those to whom the message is given - who the expert is will be viewed differently by different population groups. The choice of personnel to handle various types of educational interventions (e.g. teachers, other learning mediators, media personnel and project administrators) has to be made on the basis of this consideration from socially and culturally accepted persons with the requisite expertise.

Groups within the population who are most at risk need a different approach from that used with those who are greatly at risk. The "hard-to-reach" will have to be approached with great imagination and sensitivity. Their resistance may come from the fact that change can be a threatening prospect for them. But if the change can be seen to be leading towards a goal which is tangibly rewarding then, even with such groups, some progress could be achieved.

Education of the mother for the use and interpretation of the growth chart (especially illiterate mothers) is the best approach for the prevention of malnutrition

and early deaths of infants and children (practical suggestions for teaching child nutrition at different ages are given in Morley : "See How They Grow", starting at page 46). 7/

INNOVATIVE APPROACHES

Some of the innovative approaches have been suggested in various Notes, Comments... The village health worker 1/, 5/, 7/ could be very instrumental in community education while 1/

- visiting homes;
- educating people when they come to health posts or clinics;
- visiting people in work places (bare-foot doctors in China);
- organizing village meetings and fora; and
- carrying out extension work in nutrition and child care.

Even children could play an important role in parent education. In child-to-child programmes, 5/ ideas are suggested to be used locally for the development of programmes appropriate to various social backgrounds.

The Brazilian Experience, 10/ in home day care centres demonstrates the philosophy of PHC : the child minders, after proper training could serve as change agents. The visitor who provides supervision of the Home Day Care Center and checks on the nutritional state of the children plays an important role in identifying at risk children and disseminating appropriate information in the neighbourhood.

Written materials produced locally in simple language can be very helpful to literate and neo-literate mothers. 8/, 9/

Even these booklets, however, need to be introduced and explained in order to be effective. There is no single fool-proof recipe for the selection of the best educational method. The method must be suited to the particular consumer and particular situation in order to encourage consumers to take desirable health actions consistent with their goals, values and life-styles.

Education is more likely to be relevant and effective when it is made part of a health programme with defined actions and when it is adapted to identified sub-groups within the population. The benefits from the educational process are often synergistic and not specific to a single educational effort. Education sometimes may result in immediate action with limited benefits. Often it produces delayed results that take as long as a generation to change patterns of behaviour. +/

EVOLVING SPECIFIC PROGRAMMES OF ACTION

Some painfully familiar causes of major difficulties and failure of non-formal educational programmes are :

- rushing into action without adequate preparation (and without testing the feasibility of proposed actions and anticipating their likely implications);
- adopting imported models without tailoring them to local conditions;
- starting 'pilot projects' without keeping them going long enough to test their true value;
- failing to develop competent local personnel to take over.

These could be avoided if the specifics of each situation are carefully studied and each action is appropriately planned, for what proves to be effective in one situation might not work out in another.

+/ The American Public Health Association, Making Health Education Work, 1976, p. 72.

THE USE OF THE MASS MEDIA IN NON-FORMAL EDUCATION

In many countries there is little formal education on how to be a good parent. It is knowledge 'picked up' or gained in an informal manner from parents or neighbours - perhaps from a glossy magazine. What role can radio and television play in performing the task of parent education, presenting such material in a non-formal or semi-formal manner?

It would be argued that personal contact is the ideal approach in providing information most useful and relevant to parents and the frequent failure of programmes using mass communication media to modify health-related behaviour has led many decision-makers to discredit the use of these media for the health education of the public.

However, with the growing power of the mass media to market products through advertisements, it has become associated with the health education objective of changing behaviour, +/ since the access to the consumer is relatively easy via the media (contrary to the personal contact approach). Since in many households, the television or radio listeners appear to be indiscriminate in their programme selection, the public would receive a health message without the necessity of voluntary action. The potency of the message can be increased if it is packaged in a form which makes it palatable to the viewing audience. +/

The limited effectiveness of the mass media in modifying health-related behaviour has been well documented, yet its potential in disseminating information cannot be questioned. Clear messages and proper reinforcement need to be combined if a change in behaviour is expected.

+/ Final Report of Unesco/UNICEF Staff Workshop, Unesco, Unit for Co-operation with UNICEF and WFP, Doha, December 1982, pp. 11, 15.

+/ Grover, P., and Miller, J., Guidelines for Making Health Education Work in Public Health Reports, Vol. 91, N°3, May-June 1976, pp. 249-252.

To be effective, health education via the mass media has to adhere to the principles of design and delivery of instruction. It has to be clear on the following points :

1. Define outcome measures. Changes in health behaviour have to be clearly stated for measuring the outcome of the educational programme. This will give a firm basis for ultimate acceptance or rejection but will also suggest specific parts of the message or delivery mechanism which need modification.

2. Analyse relevant characteristics of the learner. Knowledge is needed about the target group motives and their beliefs about various courses of action. The analysis of motives should pay particular attention to factors in the target group's environment which can impede or facilitate the desired behaviour.

3. Gain and maintain the learner's attention. Appeal to the learner's dominant interests and incorporate change, novelty, action and colour to maintain attention. At the same time, key points should be presented simply and in a straight-forward manner.

4. Establish the learner's vulnerability. Perceived susceptibility is a strong motivation for seeking health care. The viewer has to be convinced that the health message is related to him - one technique is to relate the condition under consideration to events common in the culture of the target audience.

5. Demonstrate need for action. Together with a perception of vulnerability, a perception of the seriousness of failing to act must be established. The gravity of the message may be increased by the use of recognized authority figures such as a physician, or by the vicarious experience of a character

with whom the target audience can identify. Health advice given by respected members of the local community should have high credibility but this tactic can only be used with locally produced material.

6. Establish the learner as an agent. Suggest some specific action which the learner may take to avoid or mitigate the serious consequences presented (ORT, immunization, breast-feeding, spacing of births). What to do, how to do it, where to go - all should be suggested simply, to the point and at the minimum necessary to facilitate recall.

7. Establish the learner's effectiveness. The target population must be convinced that their actions will work. A demonstration of the effectiveness of health-related actions (use of growth charts, ORT, immunization, spacing of pregnancies) will serve as reinforcement of proper action, which should be supplied through other mechanisms in the system as well. Statements by local community members affirming the positive outcomes of regular weighing and use of growth charts, full immunization, and breast-feeding, would increase the credibility of the message.

8. Provide for practice. Opportunities for practice of the relevant action and feedback on performance should be provided (preparation of ORT and proper weaning foods, recall of immunization agenda, etc.). This follow-up should be co-ordinated by the community health worker.

9. Repeat key facts. Key facts relating to vulnerability, seriousness and actions to be taken should be repeated consistently within a message, as well as by professionals in the general health care system. (In this connection spot announcements can play a big role.)

10. Generalize similar situations. Provision should be made for the transfer of the relevant learning to situations beyond the context of the educational programme. Reference should be made to other circumstances and situations which require health-related actions similar to those presented in the programme.

As mentioned before, information alone seldom leads to action. The basic role of the mass media is informational, but it cannot be expected to change behaviour. (The literature on the effectiveness of mass education techniques, in promoting the use of automobile safety belts, or decreasing the use of cigarettes is consistently negative.)

What has to be concluded from various studies on the role of the media in health education is that information alone is not sufficient to change behaviour. Information must be accompanied by social reinforcement for behaviour to be modified. Information provides a stimulus for behaviour and, if performed, can be rewarded appropriately. Rewards for the expected behaviour usually result in subsequent similiar behaviour. Therefore information via all media must be accompanied by social reinforcement. (In some cases, the modification of environmental factors by mandatory requirements would be a more effective means of modifying behaviour - example : vaccination requirements for entry into the school system, banning the sale of milk formulas, etc.)

Just as there are guidelines for the production of instructional material via the media, there are also guidelines for socially reinforcing the person who acts on the message. These guidelines are :

1 Define outcome behaviour. The person who provides reinforcement to the learner must know what outcome behaviour is expected from listening or seeing the instructional message. The behaviour which is identified should be so clear and specific that the health professional, the target learner, and members of his family can determine exactly what behaviour should be reinforced.

2. Determine baseline behaviour. Specifying the outcome behaviour tells both the health professional and client where they are going. Determining the baseline behaviour tells them where they must start. The assessment of baseline behaviour may include several behaviours which are pre-requisites for final performance.

3. Structure of a favourable situation. A situation must be created in which it is likely that the desired behaviour will occur and, at the same time, it is unlikely that competing behaviour will occur (for example, limiting the sale of milk formulas).

4. Establish what motivates the client. Health professionals or members of the family will need to determine with the learner what he or she considers rewarding. Rewards may include social rewards such as, praise, recognition or attention, tangible rewards or behavioural rewards such as engaging in certain activities. Knowing what the clients consider rewarding is necessary in order to withhold rewards for incompatible behaviour or to provide rewards for desired behaviour.

5. Establish a trusting relationship. Just as it is important to gain and maintain the learner's attention while he or she is seeing or hearing the message, it is important that the learner feels comfortable in the health setting with the reinforcing person. The

contact period should be long enough to allow the client to see the health professional as a trustworthy, straightforward and honest person.

6. Evaluate outcome behaviours. Assessment of the learner's progress should be based on a continuous, objective record. The records provide information for evaluating the effectiveness of the rewards and also serve as a reinforcement mechanism for the learner, family members and health professionals (growth charts).

Research has established that enabling factors in the environment affect the performance of outcome measures. Enabling factors include the availability of specific resources necessary for the client to adopt the behaviour in question.

Some of the factors which influence access to primary health care are :

1. *Barriers relating to site and location. The client is not likely to follow health education instructions if the setting creates psychological barriers for him or if distance, time or energy expenditure keep him from returning to the health setting.*

2. *Barriers due to limited time when services are available. The time most convenient for the client to use health services may not coincide with the most convenient for the providers.*

3. *Financial barriers. People are not likely to follow health education instruction if they cannot afford to do so. Preventive behaviour particularly is likely to be given a low financial priority.*

4. *Organizational barriers. Long waiting times, complex bureaucratically-oriented policies, fragmented services, etc. do not help people in following health instructions.*

In short, health education messages must be developed around sound educational principles, but messages or instructions alone do not effect behaviour change. Reinforcement for following instructions in the media is necessary. Clear messages and proper reinforcement need to be combined with consideration of the environmental factors which may enable or hinder the patient in making the necessary behavioural change.

CHAPTER V

FORMAL EDUCATION FOR PHC

If we accept the concept of education as a life-long continuous process, then health education cannot be separated from general education. It should be a part of the general education which society organizes for all its members.

> *Health education is defined as any combination of learning opportunities designed to facilitate voluntary adaptations of behaviour (in individuals, groups or communities) conducive to health. In contrast, health promotion is defined as any combination of health education and related organizational environmental and economic interventions designed to support behaviour conducive to health.* +/

In the context of education for PHC, we are mainly concerned with health problems. This would involve the following steps 6/ :

1. Knowing and cultivating health awareness. A health conscious individual should know how his body functions, how it can be kept fit, how diseases are caused and how they

---

+/ Greene, L., National Policy in Promotion of Health, International Journal of Health Education, 22(3): 164, 1979.

can be prevented or cured. He should also know what he should do or should not do to keep healthy so that his actions do not harm the environment or cause illness to others.

2. Living or adopting a life-style which is promotive to health. This is quite different from the consumerist attitude to health where an individual gives full license to himself and then tries to buy 'health' through doctors and medicine.

3. Participating or cultivating a social responsibility for health. An individual must realize that health has a social aspect and that the health of the individual is to be sought in the health of society as a whole. He should therefore be aware of the social causes of illness and be willing to play his role in remedying them.

4. Having or cultivating attitudes and values promotive to health. Every individual will have to develop his own philosophy of health just as he will also develop his own philosophy to life.

Health education therefore is three-fold : giving information, teaching skills and changing behaviour.

If we look at health education as a continuum, then we find the following stages :

1. Children up to six years of age (pre-schoolers) learn at home. The responsibility for health education which the child needs at this stage falls on the mother. By the age of six, the health personality of the individual, like

his life-style, would have been more than half formed, hence the important role of the mother in the health education of children.

2. Age group 6-14 : At present elementary education is not universal nor has health education a prominent place therein. In the developing world, it is estimated that the number of children outside the schools is now much more in absolute terms than it was sometime ago; and the position does not seem to be improving due to the high rates of fertility coupled with resource constraints experienced by these countries in enforcing universal primary education.

In general, the past decade has seen major advances in both the quality and quantity of school education. +/ However, evaluation suggests that health education has had little effect on life-styles. In general, the messsage seems literally to "go in one ear and out of the other". This may have been the result of over-reliance on traditional teaching methods and too much emphasis on "talk and chalk" - that is, long lectures delivered with the help of a blackboard.

Recently, however, there have been some radical changes in some schools and new approaches have been developed based on social learning theory. Modern health education programmes now rely on "doing" as on aid to learning with emphasis on role play, individual learning from assignments and well-produced visual aids. Much more attention is given to fitting the activity to the personality of the learner.

PRESENT SITUATION OF HEALTH EDUCATION IN THE THIRD WORLD 13/

Although there are some innovative approaches in some of the developing countries, the majority seem to have the following common points :

+/ Reid, D., Learning Good Health in World Health, January-February 1984, pp. 5-7.

- There are no independent structured courses on health, but rather the teaching of health is included in other subjects : natural sciences, domestic sciences, civic instruction, etc. The result is that it is not given the prominence it deserves and pupils get very little benefit from it.

- The content is generally prepared by the educators without the assistance of specialized health professionals. So health instruction takes the cognizance of the real health and psychological needs of the children and the major health problems affecting the community and the country.

- Most teachers are not trained in health education and are left to their own initiative. They do not have the support of a clear, well-designed syllabus, nor adequate resource materials or visual aids, nor well-defined instructions/guidelines and approaches.

- Teacher training colleges give little or no focus on health education.

- There is little or no research to find out what people know about health or what their attitudes and behaviour patterns are with respect to health.

- The lack or inadequacy of sanitary facilities in schools does not provide the students with an opportunity to take care of their own health or to improve their health habits.

****

In 1966, Unesco published a source book by C.E. Turner on "PLANNING FOR HEALTH EDUCATION IN SCHOOLS". +/ It stated that in order for health education to be effective, it must

****

+/ Turner, C.E., Planning for Health Education in Schools, Longmans/Unesco, 1966, pp. 1-3.

be adapted to local needs and conditions - i.e. it must be planned nationally, regionally or locally, depending upon the unit of population and the organization of education. It stated also that planning for effective health education in schools must consider all of the learning experiences in health at school or under the control of school personnel, not merely the formal classroom instruction in health or hygiene. The learning experiences in health are provided or influenced through :

- *healthful school living;*
- *school health services;*
- *health instruction;*
- *school, home and community relationship.*

A number of principles underlying health education in schools were given .

1. The ultimate objective of health education is the promotion of healthy living. Because the health of the child is influenced primarily by what he does, not by what he knows, health education should be behaviour centered. The pupil should think of hygiene as associated with conduct and not as a series of facts to be memorized. Motivation is an important part of health education - it bridges the gap between knowledge and action.

2. Appropriate incentives for healthful living are used at the respective age levels.

3. Health education is directed towards the health problems of the child.

4. Health practices of the teacher are important in influencing the health behaviour of the pupils.

5. Health education should, insofar as possible, be positive not negative (emphasis on what to do, rather than upon what not to do).

6. Health instruction gains strength when it is related to the natural interests of the students.

A review of current school health education programmes shows that although there are some successes, nevertheless substantial negative areas still remain. For example, school health programmes rarely appear to have any impact on eating habits. Many favourable results are often relatively short lasting (the brushing of teeth, giving up smoking, etc.).

To find out why school health education is effective for some topics but not for others, why its effects are sometimes so short lasting we need to look more closely at the relationship of health education and health.

The first difficulty with school health education is that teachers do not always see a necessary connection between health education and health. The aims of many school programmes are "to provide information", or "to improve decision-making skills". Changes in health-related behaviour are not necessarily seen as an expected, or even desirable outcome. If a school programme is not intended to influence health, we should not be too surprised if it doesn't.

The first step, therefore, is to encourage teachers to accept the promotion of health as an integral part of education.

The second difficulty to succeed with school health education lies in the possible conflict of values between the school and the community.

If health education is to be fully effective, we must consider the context in which it is taught. We therefore need to identify the factors which pre-dispose, enable or reinforce good health. Thus, if our goal is to reduce the incidence of intestinal diseases, it is not sufficient to provide information or improve instruction. Before commencing any educational programme we must also ensure that proper and clean latrines, a safe and potable water supply and proper disposal system of garbage and excreta are available and that the general state of hygiene in the school and surrounding area are satisfactory.

In fact, we really need to turn the whole question upside down - instead of asking how we can make health education effective we need to start with a clearly defined health problem and identify all the factors which can contribute to its solution. Within this framework, we can assign a particular role to health education, but we cannot expect it to be fully effective except in conjunction with a variety of other measures. Thus Primary Health Care comes into the picture.

COMMUNITY SUPPORT FOR SCHOOL HEALTH EDUCATION

Community influences, themselves, are important when we consider the disappointingly short-term effects of some school programmes. Every teacher knows that new ideas are rapidly forgotten if they are not reinforced, that is, by referring to the same topics again, perhaps from a different perspective on each occasion. This explains the failure of "health weeks". Schools need to plan health education as part of a spiral curriculum, returning to each major topic every two or three years.

By far the strongest source of effective "reminders", however, lies in the community. Provided parents are actively involved in the programme, much of the reinforcement can be supplied by them. But if parents, governments and commerce are all pulling in the opposite direction to schools (as often occurs with nutrition), school health messages will be as effective as a whisper in a thunderstorm.

Health education or promotion cannot be successfully imposed from above. Similarily, major advances in health promotion cannot occur without the whole-hearted support of the community - so the first step towards effective health promotion is to arouse community awareness. As suggestions and support from the central level will always be helpful, however, detailed planning and implementation must be carried out at the local level, as health problems and needs differ from one locality to another and it is the community itself that can judge what are its health needs and the resources available to meet them. Health education is therefore not to be seen as an end in itself, it is simply one of several approaches towards the promotion of health by preventive methods.

CHILD-TO-Child-PROGRAMME

Interaction between the school, family and community results in public acceptance of the health practices recommended by the schools and the active involvement of school children in the promotion of health by means of other community programmes, such as functional literacy, development projects and cultural activities 13/. The CHILD-to-Child Programme is based on the recognition that, in many developing countries, the principal mother-surrogates for small children are older siblings. The programme aims to utilize this as yet untapped resource by enhancing the knowledge and capability of school-age children in five broad areas : nutrition, health,

> *By far the strongest source of effective "reminders", however, lies in the community. Provided parents are actively involved in the programme, much of the reinforcement can be supplied by them. But if parents, governments and commerce are all pulling in the opposite direction to schools (as often occurs with nutrition), school health messages will be as effective as a whisper in a thunderstorm.*

Health education or promotion cannot be successfully imposed from above. Similarily, major advances in health promotion cannot occur without the whole-hearted support of the community - so the first step towards effective health promotion is to arouse community awareness. As suggestions and support from the central level will always be helpful, however, detailed planning and implementation must be carried out at the local level, as health problems and needs differ from one locality to another and it is the community itself that can judge what are its health needs and the resources available to meet them. Health education is therefore not to be seen as an end in itself, it is simply one of several approaches towards the promotion of health by preventive methods.

CHILD-TO-Child-PROGRAMME

Interaction between the school, family and community results in public acceptance of the health practices recommended by the schools and the active involvement of school children in the promotion of health by means of other community programmes, such as functional literacy, development projects and cultural activities 13/ The CHILD-to-Child Programme is based on the recognition that, in many developing countries, the principal mother-surrogates for small children are older siblings. The programme aims to utilize this as yet untapped resource by enhancing the knowledge and capability of school-age children in five broad areas : nutrition, health,

accident prevention, child development and intellectual stimulation. Simple activities are suggested which, if mastered by older children (such as oral rehydration), could result in significantly reduced young child mortality.

"Children can help in making their community a better place to live in and this activity sheet shows some ways in which children can do this, for instance by :

- finding out about the health care resources in their own community;
- passing on to their families and others important health information;
- caring about the health of others, particularly children who live near them, by helping their families make the best use of available health services." +/

Teachers and health workers can play these activities together. Parents should be told what their children are doing and why. Activities for which the CHILD-to-Child Programme has issued activity sheets and which are presented in Notes, Comments... (Child, Family, Community) Digest N° X are :

Activity I — School Children as Health Scouts

- Finding out about the health needs of the community;
- Finding out about the health services available to the community;
- Telling others about health services;
- Helping to care for the health of others.

Activity II — Observing Early Signs of Illness

- Observation of healthy children;

+/ Morley, D.C., CHILD-to-Child Programme, Assignment Children, Geneva, 47/48, Autumn 1979, pp. 172-185.

- Observing signs of illness.

Activity III — Finding Out How Well Children See and Hear

- Helping children understand;
- Testing childrens' eye-sight;
- Testing childrens' hearing;
- Testing babies' hearing.

Activity IV — Finding Out More About Healthy Food for Babies and Children

Observing the connection between food and growing

- They can look after an animal;
- Each child can find out at home what his younger brother or sister eats during one day;
- Feeding children when they are unwell.

Activity V — Measuring Malnutrition

Making the measurement.

Activity VI — Caring for Children who are Sick

- What can the older child do for the sick child;
- Cleanliness;
- Activities in school.

Activity VII — Care of Children with Diarrhoea

- Find out how common and dangerous diarrhoea is;
- Understand dehydration and learn how to prevent it;

- The special drink;
- Learn to recognize warning signs.

Activity VIII — Care of Teeth

- Looking at teeth;
- Understanding what can go wrong with teeth;
- Learn what causes teeth to go rotten;
- Understand brushing teeth;
- Learning to look after gums.

Activity IX — Looking after Eyes

- Find out whether eyes are healthy;
- Learn to keep flies away;
- Understand what is meant by blindness;
- Survey of blindness in the community;
- Learn how to prevent blindness due to Vitamin A deficiency;
- Helping those who are blind.

Activity X — Prevention of Accidents

- Find out what accidents happen to children;
- Learn to prevent accidents;
- Learn what to do if an accident happens;
- Participate in spreading the idea. 14/

The above activities can serve as a guide to the type of learning experiences which schools are a priori supposed to offer the students so as to equip them for healthy living. In such activities the school child not

only becomes interested and keen to observe healthy practices but he is more liable to act as a health agent, transmitting the knowledge and attidues acquired by practice to the home and the community and with the skills acquired, he becomes an indispensible addition to the team of voluntary health workers which the community needs to achieve primary health care for all.

The Jamaican St. Thomas project is one practical application of the above approach. The project is based on the assumption that all aspects of childrens' development : social, emotional, intellectual, health and growth are strongly influenced by the environment, including the quality of child rearing. Parents' practices in hygienic child-feeding and adult-child interaction in the home all effect childrens' development.

The primary schools in St. Thomas parish are taken as a demonstration project to integrate child health and development and improve parental skills, with the primary school children as the heart of the programme, taking part as change agents in a teaching approach which departs from the usual primary school tradition. +/ The programme concentrates on teaching three main topics : young child nutrition, promoting a healthy and safe environment, and child development (working with 9-11 year olds). The approach stressed participatory activities for the children rather than didactic teaching stimulating the childrens' interests and motivating them to take home child health messages to their parents and to look after their younger brothers and sisters more competently. A series of songs and jingles was compiled, using folklore music and the Jamaican dialect, emphasizing all important child health and development themes. Pictures were designed which the children coloured and took home. Mindful that the reading level of both the parents and children was poor, the messages were largely pictorial. Parents signed letters saying that the children had completed specific activities, giving an indication that messages

---

+/ Love Him and Mek Him Learn, UNICEF News, Issue N°119, 1984/1, pp. 12-13.

were reaching home. Parents said that the programme helped children not only to take care of themselves, but also of other children. Some said that the children taught the adults about baby care and better health habits.

THE EDUCATIONAL SYSTEM - ITS POTENTIAL 12/

This example illustrates a concrete programme that has been successfully applied in a disfavoured community - and can be replicated in other third world countries. The formal educational system of a country can greatly contribute to the attainment of the aims and objectives of Health for All by the Year 2000.

Considering all organized institutions set up by society, it could safely be asserted that the primary school is the one through which the largest mass of humanity of a given age range passes through. That being so, it should be taken as the institution that gives the highest pay off and provides the greatest opportunity in influencing human behaviour.

Teachers in schools constitute a resource of the highest order :

- In developing countries the highest concentration of educated manpower is found in the education system.
- The distribution of teachers in a country is also very favourable to development. The network of schools scattered throughout the urban and rural areas of a country, situated and staffed as they are, are ideally located to serve the people.

- The teachers hold prestigious positions in the eyes of the community, they could act as community leaders, change agents and liaise with other government and non-governmental agencies working in the community.

But the school systems are not without weaknesses as far as health education is concerned :

- For the most part, school programmes are ill-adapted imports from developed countries. They tend to follow prescribed centralized courses of study though these may be unrelated to the needs and problems of the countries concerned.

- In most countries, health studies are not a very prestigious subject in the curriculum. There are no special health education teachers - anyone is taken as competent to teach this subject - yet in-service training programmes for teachers rarely concentrate on health promotion. As a result of this lack of recognition, hardly any innovative programmes have been launched.

- In most developing countries, school health services are not functioning as expected and with the increase in population and ever-growing scarcity of medical personnel, the position is aggravating. It is time to consider alternative courses of action.

The sub-regional consultation on Health Education in School held in Bangui, Central African Republic, October 1983, highlighted the following points based on country reports : 13/

1. The responsibility for health education in schools is shared between the Ministries of Education and Health - other ministries and NGOs make contributions from time to time. However, co-ordination and inter-sectoral approach are not smooth and remain a weak link in the chain.

2. No independently-structured courses on health exist with the result that the teaching of health is included in other disciplines - natural sciences, domestic science, moral and religious instruction. Consequently, it is not given the prominence it deserves and thus pupils derive very little benefit from it.

3. The content is generally prepared by the educator without the assistance of the health professional. It takes little cognizance of the real health and psychological needs of the children and the major health problems affecting the community and the country.

4. Active teaching and learning utilizing active methods such as role-playing, demonstration and field visits is limited. More often teachers rely on theoretical and abstract facts.

5. Most teachers of health lack adequate training and are left to their own initiative. They do not have the support of a clear, well-designed syllabus, supported by adequate resource materials, visual aids and teaching equipment and well-defined instructions/ guidelines and approaches.

6. Teacher training programmes give little or no special focus on health education. Most colleges have no qualified co-ordinator or focal point for organizing health education courses. Trainers therefore receive little or no instructions on how to provide health education and/or organize instruction sessions at schools or in the community.

7. Little or no research studies have been carried out to find out what schools and the community know about health and what their attitudes and behaviour patterns are with respect to health.

8. Health-related tasks given as punishments to pupils by some teachers, as well as compulsory courses needed to pass examinations are additional factors contributory to the persistent disinterest of pupils in health courses.

9. Sanitary facilities which embrace the potable water supply and disposal of excreta and garbage, as well as the general state of hygiene in the school and its surroundings are, on the whole, unsatisfactory, particularly in rural communities. School meals, first-aid kits, school safety, lighting and ventilation conditions, facilities for recreation and rest, etc., are equally deficient.

   The lack or inadequacy of the sanitary conditions do not provide an opportunity to take care of their health or improve their habits. "When schools break the rules of hygiene, it is difficult, if not impossible, to give children effective and meaningful health education".

10. School health services, if they exist, are carried out in a sporadic manner. The health coverage of the school population remains low. This is due to resource limitations and a lack of co-ordination between the national health services and education.

SUGGESTIONS FOR THE PROMOTION OF SCHOOL HEALTH EDUCATION PROGRAMMES IN THE CONTEXT OF PHC

A. Co-ordination and Collaboration

Strengthening co-ordination between the Ministries of Health and Education, and the promotion of collaboration between these two sectors and other development sectors concerned with health and health education at school.

- One possible co-ordination mechanism is the creation of interministerial committees at the various levels comprising influential persons, ministries, interested bodies, NGOs and parent associations.

- Another mechanism is the establishment, at the local level, of a school/community health committee with the representation of teachers, school children and the community to encourage direct participation by school children in extra-curricular health activities and to interest the community in the various social, health and other activities of the school.

B. Human Resource Development

- Inclusion of a health education programme in all teacher training and retraining programmes. One approach is to establish a nucleus of health education specialists responsible for organizing health education programmes in schools, to assign qualified health educators to the Ministry of Education, to plan and co-ordinate the teaching of health education, to utilize the results of prospective studies on health behaviour in the school children in each region or country.

- To promote a multidisciplinary approach to health education in schools by training all the staff involved in health education activities in schools, health services and the community (teachers, inspectors, technicians and supervisory staff in various development sectors, health personnel, rural development workers, village chairmen, social workers, religious leaders).

C. Organization of School Health Services and School Health Activities

- Promote and strengthen a minimum level of school health services in the light of the

number of pupils and the school's geographical accessibility. These could be supervised by the nearest health care unit.

- Frequent visits to the school/community by health workers, including PHC workers, to assess the prevailing health conditions and, in collaboration with the teachers, to prepare appropriate educational preventive, remedial and curative activities.

- Regular medical surveillance of school children by the school health service, the introduction of periodic inspections of the school sanitary facilities and the initiation of nutrition and hygiene programmes as part of a consistent plan of operation.

- Since without sanitation, health education cannot produce the best results, health committees should be established in all schools. These committees could include teachers, pupils and even parents and look into matters pertaining to the maintenance of a healthy school environment, such as : 12/

  i. the provision of safe drinking water and the manner of dispensing the water;

  ii. the sanitary maintenance of whatever toilet facilities exist - or/and the building of functional low-cost latrines;

  iii. washing of hands;

  iv. the preparation and distribution of the school lunch where one is provided;

  v. the disposal of waste and maintenance of cleanliness in both the school and garden;

  vi. safety at school;

  vii. the lighting and ventilation may be difficult to change but campaigns can be organized towards improvement.

Developing habits of hygienic living among pupils and providing for healthful living in school are matters that should be encouraged. Not only do they make children develop positive attitudes which lead to good health habits and practices, but they also reach out to the families and the community. The children themselves may influence the behaviour of the parents though the reverse too could happen where children are confronted with dual standards and may revert to the ways of the family. This is where contact with parents and visits to homes may prove helpful.

D. Improvement of the Instructional Component of Health Education

There are four components which are related to health instruction : curriculum, instructional methods, instructional materials and evaluation. 15/

i. Curriculum

In view of the importance of the primary classes, very great care has to be exercised in planning their programmes. Firstly, in developing countries the teachers assigned to teach the primary classes are the lowest qualified and, more often than not, they are untrained and, secondly, attempting to teach children of the primary-age range

in a few years something that will have "carry-over" value for life is certainly a very ambitious undertaking.

This is all the more reason why special care has to be exercised in planning their work considering the primary as terminal for most of the children. Providing a healthful school environment and fostering in the children healthy attitudes in regard to basic sanitation and hygienic living should go hand in hand with classroom instruction in health by way of formal lessons and incidental teaching whenever a health problem or a health-related situation is confronted.

In most countries, health and nutrition education is taught not as a separate subject but is integrated in other subjects. This integration has its advantages as well as its disadvantages. Health can certainly stand on its own feet and also spill over onto other subject disciplines. Science, home economics, social studies and language certainly have common grounds with the concerns of health, however, there is the risk of diluting the importance of the subject, usually both the teacher and the learner would concentrate on the main subject and pay very little attention to the integrated subject. Besides it always happens that the teacher who teaches the main subject is not competent to teach other subjects in which he is not specialized. Another important argument against integration is that evaluation cannot be effectively made because the objectives would be those of the main subject and not of the health and nutrition subject.

School health instruction in most countries still lays emphasis on cognitive learning with a view to infusing knowledge of health concepts to the detriment of fostering health practices and habits. A shift from information giving to the development of skills and real life experimentation in health is badly needed. Health can never be a text-book subject. Habits and practices leading to the formation of lasting attitudes should become the focus of health instruction.

Teachers could contribute to curriculum development by specifying the learning needs of children - these cannot come from a curriculum that is centralized as it becomes difficult to make learning experiences relevant to community situations. Curriculum should be made relevant to the needs and problems of the community, should make use of available local resources and link in-school and out-of-school learning. Thus learning to understand priority health problems and the means of preventing them and the promotion of health in the community (promotive and preventive aspects) can form the subject of interesting projects such as the Sri Lanka project. 12/

Teachers can become curriculum developers since they relate what they teach to the needs and problems of the community they serve. In order to accomplish this, they need training in how they could do this effectively.

At the central level, guidelines for teachers and prototype materials such as check-lists of health habits, check-lists of observation/inspection items for use in schools and techniques of establishing rapport with the childrens' parents in the follow-up need to be developed. However, if we desire teachers to be innovative in outlook and, in keeping with their changing roles, assume the roles of change agents and community leaders, the professional training of teachers must necessarily contain the ingredients that will make them think and do as desired. If, on the other hand, the training given is traditional and narrowly geared to a teacher's classroom functions, as many training programmes are, we cannot expect teachers to do little more than what they are trained to do.

Pre-service teacher training brings teachers together for long periods of time. This is the time for innovative activity, for unless such activities are fused into training programmes, the mere pursuit of professional and academic studies from the pages of textbooks can be a rather tedious and sterile exercise. This can take the form of community projects or extension work where teachers select an area of activity and go into the community and help the community gather knowledge and skills in the selected fields that will be useful to them.

The problem-solving approach can constitute the basis for teacher training in health education and later in teaching health in schools.

The five point approach to problem-solving

1. Definition : *How is the health problem defined. What are its characteristics.*

2.	*Distribution*	: *How spread out is the problem in the community. What is its distribution among population groups.*
3.	*Causality*	: *What are the causes of its occurrence, its continued existence.*
4.	*Resolution*	: *What methods may be used to reduce or eliminate the problem.*
5.	*Outcome*	: *What results may be expected from different attempts to resolve the problems. What may be expected if there is a failure to intervene.*

ii. Methods of Teaching

Teachers may be well aware of the importance of learning through direct experiences and motivation. However, they may lack the facilities (such as the supply of safe drinking water and sanitary toilets). These shortcomings prevent the translation of health concepts into concrete action. The absence of linkages between the primary school and health services is another handicap - so is the lack of linkages between the formal and non-formal systems of education.

Several methods of teaching are relevant to health education, the participatory

ones being more effective than the didactic ones. Some of the more effective methods being used are :

- *Direct experiences;*
- *Field trips;*
- *Demonstrations;*
- *Class projects;*
- *Games;*
- *Dramatization and role playing;*
- *Exhibitions;*
- *Puppet shows;*
- *Use of films and slides;*
- *Discussions;*
- *Incidental teaching.*

iii. Instructional Materials

There is a trend to use low-cost and easily accessible materials as instructional aids. These low-cost materials are used for making visual aids (charts, posters, puppets, real objects and some simple tools). In countries with a better economic status such materials as films, filmstrips, slides, tapes, videos and electronic instruments are used. However, these tend to pose two kinds of problems :

- maintenance and up-keep of the equipment;
- relevance of imported software (slides, films, etc.) to local conditions.

The use of local resources and situations as materials for study should therefore be encouraged. This is done by organizing relevant activities such as study visits to local health centres and participation in community development projects.

iv. Evaluation

Curriculum evaluation usually covers two aspects, namely performance evaluation and programme evaluation. The first aspect of evaluation concentrates on knowledge gained by the students as well as their health practices. This usually takes the form of observation, health records, diaries, samples of personal creative work, oral and written tests, criterion-referenced tests or performance tests.

Programme evaluation is usually made through continuous feed-back from teachers on the appropriateness and effectiveness of the materials, the training programmes, the administrative procedures and some simple continuous record of the nutritional status of the children. To assess the progress of the programmes, surveys of the health status of parents, children and teachers are made. Questionnaires to elucidate the impact of the programmes on children and teachers are also formulated.

E. Strengthening School/Family/Community Co-operation

- Sensitizing the community and creating an awareness on matters affecting their childrens' and their own health (through functional literacy, information campaigns, use of non-print media, etc.).

- Develop mechanisms for such interaction :

  i. participation of school children with the community in health education activities;

  ii. formation of a school health committee of teachers, parents, health workers and local leaders to facilitate health education and services for the whole community, including the school;

  iii. school visits by parents and home visits by teachers;

iv. organizing exhibitions or fairs on health subjects;

v. promotion of health and sanitary facilities in the community;

vi. improvement of nutrition through the better use of available foods, the production of essential foods and the prevention of food wastage through improved storage, preservation, handling and marketing, and a wise selection of foods for the daily diet of the individual and the family.

ORGANIZATION OF SCHOOL HEALTH EDUCATION PROGRAMMES IN THE CONTEXT OF PHC 13/

The organization of school health education programmes will depend largely on national education and health policies in the context of their socio-political systems.

The main aim of health education is to develop in people a sense of responsibility for their own health and that of their community and an ability to participate in community life in a constructive and purposeful way. The main goal of PHC is to provide appropriate health care to the people near to their homes with their participation and with the mobilization of available resources in the context of integrated development.

The goals of health education fit well with PHC which places a major role on community participation with maximum inter-sectoral co-ordination and the promotion of self-reliance, self-care and self-responsibility.

- Health and education authorities should realize that schools are an active part of the community and therefore should be associated in the planning and implementing of PHC and other developmental activities through appropriate school health education programmes.

- School health education programmes should inculcate in the pupil's mind that people have the right and the duty to participate individually and collectively in the planning and implementation of their own health care and that community involvement in shaping its own health and socio-economic future is of vital importance for general development.

- The inter-sectoral and mutlidisciplinary feature of health development and PHC should also be well reflected in school health education programmes. This implies inter-sectoral co-ordination efforts, particularly between the health, education, social affairs and agricultural sectors.

A. Policy and Structure

In the context of national health and education policies, a policy of health education in schools should be clearly formulated, priorities identified, objectives defined and strategies/approaches worked out, taking into account the resources available.

Inter-sectoral co-ordination/collaboration is crucial. Each country should set up its co-ordination machinery in the context of its political, administrative, cultural and socio-economic structures. For instance, interministerial health committees with representation from the key ministries of health and education and other sectors such as agriculture, water, social welfare, information, can be established at the national and regional/district levels.

B. Health Instruction and Teaching

i. Content

Courses should reflect the needs of the school population, the health problems with a high local priority and the socio-economic conditions.

The aim should be to design a course content which is relevant and of interest to the target group. The identification of community needs is the approach recommended for such content design. This can be realized through small local surveys and through the use of any available epidemiological data. 17/

PHC offers a suitable frame for promoting school health education programmes at the community level. There is the possibility for fruitful co-operation between the school teacher, health worker and other agents operating in the community as well as between these 'technicians' and the local authorities. The selection of the course content or topics for health education sessions by school teachers can easily be done through an analysis of the relevant PHC components, taking into account the local health problems and socio-economic needs. Health education in schools can be an entry point for a wider community mobilization for, and involvement of, health development programmes within the framework of integrated development.

The political, technical and administrative support at the top is essential to bring success to such local action.

But whether the health education course is designed as an independent discipline or integrated with other subjects, it is always important to emphasize the concept of "Education for Health" which encompasses all experiences a child is exposed to within and outside the school. Health instruction and teaching is only a component of "Education

for Health". Other components which must be taken into account include healthful living, utilizing health services and the active school/family/community co-operation.

ii. Appropriate Teaching Methods, Techniques and Materials

It is important that health be taught as a way of life so that students learn from real life experiences both in school and outside. Methods should be practical and geared to teaching a skill for living rather than book knowledge for passing examinations.

- Traditional methods of communication such as stories, drama, songs, games, etc. should be investigated and adapted to suit health information and education within the community.
- Use of direct health-related experiences should be maximized such as immunization sessions, health screening, daily inspections, etc.
- Individual pupil guidance.
- Incidental teaching in teachable moments in a class situation.
- "Buzz group" organized to discuss a particular question or problem for a few minutes and report conclusions to the class.
- Individual student projects on a health topic.
- Writing and illustrating short stories about health and health-related stories.
- Guest speakers from health or other related sectors.
- School health weeks.
- Demonstrations.
- Exhibitions.

Teaching should be done in units, each covering several lessons and each unit having a clear statement of objectives indicating the knowledge, attitudes and health practices affected. The teacher should have outlines suggesting a variety of activities either in plans for teaching units or in a separate discussion of methodology. He should also have appropriate teaching aids and sources of information.

Suggestions for giving the course more relevance and impact :

- Use of suitable learning experiences. Pupil's experiences in healthful living and in relation to school health services to provide some health teaching content.
- Using health problems of pupils, family and community as part of health instruction.
- Developing suitable motivation towards healthful living and furnishing examples of healthful living.

iii. Opportunities for health education activities by students and teachers both inside and outside the school

Activities both inside and outside the school provide valuable learning experiences and reinforce the role of the school as a promoter of PHC in the community contributing to school/family/community interaction :

- CHILD-to-Child activities where older children help to care for and protect the health of their pre-school siblings;
- community social and develpment activities such as :
  - . campaigns against communicable diseases;
  - . campaigns in accident prevention;

- village cleanliness campaigns;
- community water supply projects;
- home improvement activities;
- special day activities - World Health Day;
- school garden;
- immunization campaigns. 16/

iv. Evaluation of the impact of health education programmes on pupils' health knowledge, attitudes and behaviour

Every health education programme should embody an element of monitoring and evaluation. The results should be brought to the knowledge of the authorities concerned and utilized in the adjustment or improvement of the programme. The results should be of interest to the teachers, pupils, parents, administrators and community members and others in the various sectors.

Teachers should know and possess at least simple evaluation techniques/skills.

C. Teachers and Other Personnel

The key to the success of an effective health education programme in school is the teacher who should be well prepared in health education. The preparation refers both to basic training and pre-service/in-service training. Such training should provide the opportunity to deepen and widen understanding of the socio-economic development process in the context of PHC which calls for integration, inter-sectoral collaboration, mobilization of scarce resources, participation of the community, self-reliance, training in communication skills. Some topics for teacher training are given in the Appendix.

The training of teacher educators should receive highest priority. Appropriate in-service training and re-orientation should be developed for headmasters, inspectors, health education personnel responsible for the media (radio/television) and other health personnel.

D. A Healthy Environment

It is of little value to teach health effectively if the principles of hygiene are violated in the school life of the pupils. Pupils should develop habits in hygienic living from healthy schools. Schools should demonstrate ideals of healthy living and should be provided with the essential facilities to enable the pupils to put the principles of the healthy life into practice. This involves, among others, the following :

- Healthy environment
  - . sanitary disposal of excreta
  - . suitable disposal of garbage and other wastes
  - . sanitary dispensing of safe drinking water
  - . facilities for handwashing, etc.
- School safety

  the buildings and school compound should be safe for the pupils' living conditions
- First-aid and emergency care facilities
- Weighing and measuring of pupils so as to assess the growth of the child in relation to his age
- School meals

  food at school may contribute to good nutrition and teach the pupil how to protect himself from nutritional deficiency
- Morning inspection (body hygiene and clothing).

E. School Health Services

School health services are a very important component of the students' health education because of their contact with the school health services, students learn their own health status and needs. They also identify the importance of medical and public health services.

Given the inadequacy of the resources for developing a parallel school health service, the community health service should co-operate with the school on a responsibility-sharing basis in providing a school health service. Teacher/parent/nurse or doctor co-operation is needed and an effective mechanism for the school health service should be established.

F. School/Family/Community Relationship

Schools are part and parcel of the community, sharing all local socio-cultural, political and economic structures. Schools can influence community health practices. In fact school children are potentially the nucleus of a community health teaching force. Teachers should make a follow-up of their pupils' health practices in their homes and community and promote parents' co-operation in assisting their children. Parents' visits to school should provide an opportunity to see the hygienic conditions in which their children work, to appreciate what their children learn and to follow-up the teachers advice at home, out of the school hours.

Parent/teacher associations, community and school committees can play a crucial role in planning and implementing school health education activities and in promoting closer co-operation between parents, teachers, local authorities and students.

Students should also get themselves involved or be encouraged to participate in general community development projects such as "functional literacy" campaigns, "keep your village clean" campaigns, "protection of water resources" campaigns, "child immunization" campaigns, etc.

These activities are extremely vital in developing co-operative efforts and a sense of responsibility among the students in schools.

AN EXAMPLE OF LISTS OF TOPICS IN HEALTH EDUCATION

I. TOPICS TO BE PRESENTED IN PRIMARY SCHOOL

Grades I to III

Health school living:

Health instruction on:

- biological need for air, water, food and sleep;
- the dangers to health from organic matter and communicable diseases (dangers of housefly, mosquitoes and rodents);
- food and nutrition: child should learn to eat daily a variety of food which will provide adequate protein and other dietary essentials;
- disease: follow practices of cleanliness to avoid skin diseases and to prevent their spread;
- mental health: learn to concentrate on what he is doing; accept his peers and be accepted by them;
- dental health: clean his teeth regularly and in an approved manner;
- eye health: wash his face clean; read only in a good light without shadow glare;
- ears: refrain from putting anything in the ear;
- breathing structure: carry a clean handkerchief everyday;
- foot hygiene: wash feet regularly;
- hygiene of the skin: wash hands with soap thoroughly before eating or handling food;
- clothing: wear clean clothing;
- sleep and rest: understand the importance of sleep and rest;

- safety: develop specific practices in regard to safety at home, in the street, at play in school;

- environmental cleanliness: drink water only from safe source of supply;

- help in keeping premises at home and school clean;

- disposal of body waste in proper place.

Grade IV

Keeping clean: personal, hands, face, hair, skin, feet, home, dishes, rooms, school, desks, classroom, playground.

Safety: fire, falls, water, motor vehicles.

Good teeth: dental care, cleaning, foods.

Good food: food affects growth, choosing a good breakfast.

Sleep and rest: times for rest and sleep.

Grade V

Food for health: growth and repair foods, fuel foods, vitamins and minerals, balanced meals.

A good digestion: digestion in mouth, stomach and intestines.

The work of the teeth:

First aid and safety: (dangers of snakes, poison).

Learning and doing: how the brain and nerves control the body.

The body at work: keeping the body strong and fit.

Grade VI

Moulds and bacteria: uses of bacteria, harmful bacteria;

Cleanliness of mouth and skin: care of mouth and teeth, the importance of clean skin.

The cleanliness and care of breathing structures: common colds, and how to prevent and care for them.

Clean surroundings: mosquitoes and disease, mosquito control, houseflies, bedbugs, hookworms, cleanliness at home, the care of food.

II. TOPICS FOR INCLUSION IN TEACHER TRAINING COURSES

1. Introduction

Health as an objective of education; objectives of health education; school responsibility for child health. Role of teachers in promoting school and community health. Scope of the school health programme.

2. The health of the teacher

The importance of health to the teacher and factors influencing the health of the teacher, etc.

3. Healthful school living

What is meant by healthful school living, safe and healthful environment?

4. The child

The art of observing children. The relationship of health status and learning.

5. Growth and development

Patterns of physical growth and development. Factors influencing growth stages and rates of growth. Emotional and social development.

6. The measurement of height and weight

Reasons for weighing and measuring children.

7. School health services

The meaning, objectives, value and scope of school health services.

8. Measuring visual acuity

The structure and functioning of the eye, common visual defects.

9. Measuring auditory acuity

Structure and function of the ear. Hearing defects and their causes. Signs of hearing loss. Effects of hearing loss upon learning and upon personality.

10. Health examination

The purpose and scope of health examinations at school, frequency of examination, referral, follow-up.

11. Dental examination

Structure and functioning of teeth, dental defects and disease; dental health education.

12. School health records

What dates are recorded. Keeping health records up to date. Use of health records.

13. Health counselling

The nature and purpose of health counselling. Who should do it?

14. Communicable disease control

The nature and prevalence of common communicable diseases. Responsibility for communicable disease control; control measures.

15. First-aid and care of emergencies

The meaning of first-aid; school responsibility.

16. Special health problems

Diseases which present school problems, e.g. polio (crippling defects), tuberculosis, epilepsy, etc.

17. Malnutrition

What is malnutrition? prevalence, causes, signs and symptoms? Nutritional status of school children.

18. Mental health

Characteristics of good mental health. Mental health in relation to learning, emotional disorders.

19. Education for family living

Basic principles. Effective education for family living today.

20. Accident prevention and safety education

The nature of the problem. What is safety education; safe school living?

21. Contribution of physical education

Objectives of physical education. Contribution to growth, strength, vigour, skills and endurance.

22. Planning for health instruction, principles and methods of health education

Fitting health instruction into the curriculum. Utilizing healthful school living for health education. Essential health education approaches, methods and techniques.

23. Resources in health education

How to secure resource material from the various available resources.

24. School, home and community relationships

Learning the health status in home and community. The relationship of the teacher and the school to the home.

25. Primary health care

What is Primary Health Care? Role of the community and school in Primary Health Care programmes; approaches for community involvement; role of the teacher in Primary Health Care.

26. Evaluation

Purpose of evaluation. Scope of evaluation in school health. Evaluation procedure. Evaluation of improvements in school, home and community.

REFERENCES TO NOTES, COMMENTS...
(CHILD, FAMILY, COMMUNITY)
EDUCATION AND PRIMARY HEALTH CARE

1) N.S. 70 Non-formal Education for Primary Health Care (pp. 1-10)

2) N.S. 92 Education and Infant Mortality - The Problem of Attitudinal Change (pp. 2-4)

3) N.S. 114 The Role of Education in Reducing Infant Mortality (pp. 2-8)

4) N.S. 121 Why the Other Half Dies - The Science and Politics of Child Mortality in the Third World (p. 2)

5) N.S. 115 Health and Nutrition in Early Child Development; Producing Change through Education (p. 11)

6) N.S. 137 Educational Component of a Health for All Strategy - Recommendations of an Indian Study Group (p. 8)

7) N.S. 38 See How The Grow

8) N.S. 53 Better Child Care

9) N.S. 83 Your Baby's Health from Birth to One Year and Child Safety

10) N.S. 111 Primary Care for Pre-School Children through Home Day-Care Centres - A Brazilian Experience

11) N.S. 32 Radio and Television in Parent Education in Relation to Early Child Development and Primary Health Care

12) N.S. 19 Schools and Primary Health Care

13) N.S. 144 Health Education in Schools

14) N.S. 133 Involving School Children in Community Health - Suggestions for Curricular and Co-Curricular Activities

15) N.S. 80 Asian Experiences in Health and Nutrition Education - A Synthesis of Country Review

16) N.S. 71 Teachers and Pupils as Health Workers

17) N.S. 81 Some Guidelines for Health and Nutrition Education

BIBLIOGRAPHY

- Grant, James, The State of the World's Children 1984, UNICEF NY

- People, Primary Health Care I : Progress Since Alma Ata, Vol. 10, N°2, 1983
  Primary Health Care II : Reaching the Village, Vol. 10, N°3, 1983

- Coombs, P., Prosser, R., and Manzoor, A., New Paths to Learning, UNICEF, 1973

- Grover, P., and Miller, J., Guidelines for Making Health Education Work - Public Health Reports, Vol. 91, N°3, May-June 1976, pp. 248-252

- Kichbusch, I., Involvement in Health : A Social Concept of Health Education, International Journal of Health Education, supplement to Vol. XXIV, N°4, October-December 1981

- Green, L., Reconciling Policy in Health Education and Primary Health Care, International Journal of Health Education, supplement to Vol. XXIV, N°3, July-September 1981, pp. 7-8

- The American Public Health Association, Making Health Education Work, 1976, p. 72

- Unesco, Unit for Co-operation with UNICEF and WFP, Final Report of Unesco/UNICEF Staff Workshop Doha, December 1982, pp. 11, 15

- Turner, C.E., Planning for Health Education in Schools, Longmans/Unesco, 1966

- Reid, D., Learning Good Health, World Health (WHO), January-February 1984, pp. 5-7

- Morely, D.C., Child-to-Child Programme, Assignment Children, Geneva, 47/48, Autumn 1979, pp. 172-185

- Love Him and Mek Him Learn, UNICEF News, Issue N°119, 1984/1, pp. 12-13

- Green, L., National Policy in Promotion of Health, International Journal of Health Education 22 (3): 164, 1979

Digest No. 9 *Principles and Problems of Educational Management*, by Ananda W.P. Gurugé and Dieter Berstecher

Digest No. 10 *Mobilizing Education to Reinforce Primary Health Care*, by David Morley, M.V. Joseph, Ananda W.P. Gurugé, Harmen Tiddens, Karin Edström and Fred Katz

Digest No. 11 *Handbook for Educational Buildings Planning*, by Rodolfo Almeida

Digest No. 12 *An Introduction to the Educational Planning Process*, by Ananda W.P. Gurugé and Dieter Berstecher

Digest No. 13 *From Planning to Plan Implementation : An Introduction to Educational Programming Techniques*, by Ananda W.P. Gurugé and Dieter Berstecher

Digest No. 14 *Moving Towards Universal Primary Education and Literacy*, by a Joint Unesco-UNICEF Working Group (French and Spanish Versions)

Digest No. 15 *Manual for Teachers of Young Children and Other ECCE Personnel*, by Edith H. Grotberg

Digest No. 16 *Extending Basic Learning Opportunities: Challenge and Response*, by Veda Prakasha, Ananda W.P. Gurugé, Amewusika K.B. Tay

Digest No. 17 *Education and Primary Health Care*, by Bushra Jabre